CORRECTIVE ACTION PLAN

IN

RESPONSE

TO

SDWA LAB CERTIFICATION PROGRAM

ON-SITE REVIEW

December 1-2, 1999

BY

Office of Analytical Services and Quality Assurance

FROM

WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES

OFFICE OF LABORATORY SERVICES

ENVIRONMENTAL CHEMISTRY LABORATORY

CHARLESTON, WEST VIRGINIA

Comments from EPA Assessor
Joseph Slayton
April 14, 2000

It is readily apparent from an examination of the West Virginia Laboratory Certification Program for Chemistry that it suffers from a lack of defining procedures SOPs and documentation. In the next year to eighteen months a considerable amount time and effort will be expended in order to remedy most, if not all, of these inadequacies.

Obervations & Suggestions:

1. **Proficiency Testing (PT) Samples:** The WV Laboratory Certification Program (WVLCP) has not decided on the details of operating the new PT program (the EPA no longer provides PE/PT samples). The WVCLP should establish a schedule for laboratories to participate in Water Supply studies.

   WV Response: During the on-site evaluation of our WVLCP for Chemistry I expressed our desire to set up a defining schedule in which the primary annual WS PT sample for those analytes a laboratory was seeking certification would be obtained/analyzed and the analytical results forwarded to our office for review no later than the end of the first quarter (March 31st) of each year. The make- up WS PT (for those analytes missed on the primary WS PT sample) sample would then need to be analyzed and reported to our office no later than the end of the third quarter (September 30th) of each year.
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   Such a schedule for our PT program will be documented in a written SOP covering the topics detailed in your* Observations & Suggestions. *A letter detailing the substance of this SOP will be drafted and forwarded (by registered or certifed mail) to all certified labs.

   EPA Comment: Response clear and acceptable.

2. On-Site Laboratory Inspections:

The WVCLP should maintain a record which lists the dates of inspections, analytes/analyte groups reviewed, certification status and the target/projected/estimated date (at least quarter) for the next on-site.

WV Response: Implementation of this recommended procedure will begin with this year's on-site examinations.

We now have ten in-state laboratories to audit. The initiation of a program that will more evenly spread out these on-sites for each year (over a three year period) will also be put

in place this year, 2000 (instead of inspecting all ten this year). In order to do this it is anticipated that there will be four on-sites in 2000, four in 2001 and three in 2002 (one and possibly two of our certified labs will be audited every other year for a presently indefinite period of time). Records of these scheduled on-sites will be recorded as detailed in your discussion of this section.

EPA Comment: Response clear and acceptable. **If not already included in the 2000 SDWA questionnaire please forward schedule to assessor.**

4. Documentation:

The documentation for the Microbiology Certification Program was complete and well organized. The Chemistry Certification Program lacked written procedures for Lab Certification (as detailed above for Microbiology). It is suggested that an SOP/QA Manual for the drinking water laboratory certification chemistry program be prepared.

WV Response: Although it is probably not as extensive or complete as that for the Microbiology Certification Program the Chemistry Certification Program does have an SOP/QA manual for drinking water laboratory certification. This manual is titled Laboratory Certification Standard Operating Procedure for West Virginia Bureau of Public Health, Office of Laboratory Service, SDWA Lab Certification Program. A copy of the Title page and the Table of Contents has been included for your examination. This manual is badly in need of being up-dated. We have some standard letters and methods check-lists in place that really should be included in this manual.

EPA Comment: Response clear and acceptable. **Please forward a copy of the entire document.**

5. Personnel:

Given that Dr. Morganroth alone can certify laboratories to perform organic analyses in West Virginia, it is critically important to the WV Laboratory Certification Program to assure that Mr. Larry Duffield and Mr. Greg Young are approved as Certification Officers for organic chemistry, as well as inorganic chemistry as soon as possible.

WV Response: Mr. Larry Duffield's name (and additional, requested information) has been sent to Charles Jones (Region III, Philadelphia, PA) as an applicant for the Certification Officer training to be given in Cincinnati in September, 2000. This year he will be seeking certification only in the area of inorganic chemistry, however, he has verbally informed me that he would attend in 2001 for certification in the area of organic chemistry. In addition Mr. Greg Young has informed me that he would also attend a certification officers training course (for certification in the area of inorganic chemistry). This will be implemented as soon as it is practicable.

EPA Comment: Response clear and acceptable.

6. **NELAC:**

As described previously, the WV's Laboratory Certification Program for Chemistry should be reflected in a detailed QA Manual as currently available for the Microbiology Certification Program. Also, for this update it is recommended that the laboratory consider the sections required by the National Environmental Laboratory Accreditation Conference/Program (NELAC) for a Quality Manual.

WV Response: Once the NELAC document referred to is secured work will begin on the development of a detailed and more satisfactory Quality Manual.

EPA Comment: Response clear and acceptable. **A hardcopy of the standard will be FedXed 4/16/00.**

Sincerely,

Joseph Slayton

Associated Director of Science

Final Report

2-21-00

2/21/00

Final SDWA Lab Certification Program: On-Site Review

Rev. 2-21-00

West Virginia Department of Health and Human Resources
Bureau for Public Health
Office of Laboratory Services
Environmental Chemistry Laboratory Section
167 11th Avenue
South Charleston, WV 25303

December 1-2, 1999

Joseph Slayton
Associate Director Science

U.S.E.PA. - Region III
Office of Analytical Services and Quality Assurance
701 Mapes Road
Ft. Meade, Maryland 20755-5350

Introduction:

On December 1-2, 1999 an on-site review of West Virginia's SDWA Laboratory Certification Program was conducted of the West Virginia Department of Health and Human Resources, Bureau of Public Health, Office of Laboratory Services. Laboratory SDWA certifications for inorganic and organic chemistry are conducted by Dr. Wayne Morganroth, Laboratory Supervisor, with the assistance of Mr. Larry Duffield, Chemist II and Mr. Greg Young, Chemist I. Laboratory SDWA certifications for microbiology are conducted by Mr. Thomas Ong, Microbiologist Supervisor, and Ms. Joyce Vance-Abshire, Microbiologist III.

This review was conducted through interviews, records/file review and Standard Operating Procedures (SOP) review. A joint inspection with the WV Laboratory Certification Program was planned for a local commercial laboratory but was not performed (See Section #3, in this report).

This review was conducted by Joseph Slayton, Associated Director of Science, USEPA, Region III, Office of Analytical Services and Quality Assurance, 701 Mapes Road, Ft. Meade, Maryland 20755-5350.

Personnel/Training/Vacancies:

Since the last oversight review performed by EPA in 1996, the Bureau for Public Health Laboratory has lost the capability to perform the analysis of organic contaminants for the SDWA. The inspection program lost the Certification Officer (CO), Ms. Brenda Barnett, who had hands-on experience with the SDWA organic protocols. Since the last inspection Dr. Wayne Morganroth, a SDWA CO for inorganic chemistry, has successfully completed the requirement as a Certification Officer for Organic Chemistry (Letter dated July 8, 1999 from Dr. M. Kate Smith, Ecological Exposure Research Division, National Exposure Research Laboratory, Cincinnati, Ohio). Similarly, the Microbiology section lost a CO in 1999, but Ms. Joyce Vance-Abshire has successfully completed the Certification Officer requirements for Microbiology (letter dated July 19, 1999 from Dr. M.K. Smith). Charlotte Billingsley, Associate Director, Division of Environmental & Newborn Laboratory Services, and the Director of the Office of Laboratory Services, Dr. Frank Lambert, both retired within the last few months. The Associated Director had the responsibility to oversee WV's SDWA laboratory certification program. Dr. Andrea Labik, was appointed as Director in October, but the Associate Director position has not yet been filled.

Overview:

The WV Laboratory Certification Program is based upon the Manual for the Certification of Laboratories Analyzing Drinking Water, Criteria and Procedures Quality Assurance, EPA 815-B-97-001, March 1997 and upon the 40 CFR Part 141-143 SDWA requirements, as well as, the analytical methods referenced in these documents. This includes the requirement that laboratories successfully analyze at least one proficiency testing sample per analyte (recently changed in the CFR to "per method") per year and have procedures and documentation, which

are found satisfactory by an on-site inspection by State COs at least once every three years. All of the SDWA Certification Officers are trained professionals with years of laboratory experience. In the case of chemistry, those inspectors not yet "certified" as COs by the EPA are accompanied by Dr. Morganroth who has the responsibility for review and sign-off on the recommendations from Mr. Larry Duffield and Mr. Greg Young. It is planned that Mr. Duffield attend the EPA CO's training course in 2000 and Mr. Young is to attend in 2001.

Certification Program Documentation:

The SOP/ QA Manual for WV's Microbiology Section includes a number of items relevant to the documentation of the Microbiology Certification Program. The topics in the SOP/QA Manual (Rev. 11/29/99) include: Mission Statement; Organizational Chart (Chain-of-Command); Position Requirements for Environmental Microbiology; Position Responsibilities; Personnel Performance (on-the-job-training; testing; performance evaluations); Technical Performance (demonstrated performance by labs to be certified); Laboratory Safety; Chart for Determining Certification Status; Laboratory Certification Officers (qualifications); Performance Evaluation form (used for the evaluation of analysts). The QA Manual for WV's Environmental Chemistry includes few topics relevant to the Chemistry Certification Program. The chemistry laboratory QA manual includes: instructions for sample submission to the laboratory (containers, preservations, sample handling procedures); instrument calibration; analytical procedures; data reduction; data validation and data reporting; data storage; preventive maintenance; internal QC checks and frequency; corrective action; precision and accuracy samples; and sample rejection policy.

In Addition, the WV laboratory certification program has developed an SOP/QA manual entitled: "Drinking Water Certification Program-Microbiology". This document included the following topics: Introduction (cites various supporting federal regulations and the use of the EPA Lab Certification Manual as the focus for the WV Microbiological program); Laboratory Certification Officer (qualifications); Certification Parameters; Certification Renewal (table listing forms, mailing label files, etc.); On-site Evaluations (checklists, procedures, reports, follow-up, etc.); Adding a Certified Laboratory (In-State); Adding a Certified Laboratory (Out-of-State); Performance Evaluation Samples (indicated as "UNDERGOING MAJOR REVISION"); Records Retention and Storage; Drinking Water Laboratory Certification Renewal (form); Laboratory Information Form: Drinking Water Laboratory Certification Renewal*FINAL NOTICE* (form); Drinking Water Certificate; Water Survey Schedule (template to track projected on-site inspections); Presurvey Package (cover letter and pre-survey form); On-site Inspection Report (template); On-site Evaluation Checklist; Follow-up Letter (reminder notice template for response to the on-site inspection); Follow-up Letter (2) (template for responses that were not acceptable); tracking chart for on-site evaluations (tracking corrective actions and correspondence associated with on-site inspections); Application for Laboratory Certification (form); Letter in Response to Out-of-State applications (Note: includes WV's approach to "Reciprocity"); Letter Noting Receipt of Application (form letter); Key to List of Approved Tests (the WV Laboratory CertificationProgram groups analytes for certification); Listing of Labs Certified in WV (listed by analyte groups for both Microbiology and Chemistry).

Observations & Suggestions:

1. Proficiency Testing (PT) Samples: The WV Laboratory Certification Program (WVLCP) has not decided on the details of operating the new PT program (the EPA no longer provides PE/PT samples). The WVLCP should establish a schedule for laboratories to participate in Water Supply studies. Since these samples are now available from commercial vendors, which provide them on a rapid schedule (some as frequently as every month), laboratories will have a great deal of flexibility in scheduling and securing these materials. In addition, the laboratories within the state would benefit from a letter/E-Mail explaining the details of WV's approach to the PT program. In addition, the WVLCP should include the specific plans for the PT program in a written SOP that includes: the scheduling; tracking; follow up and documentation trail and filing system for the PT program. The usefulness/efficiency of an electronic data base for storage of this information should be explored. In addition, since the State has the option under the new PT system to select a PT provider, probably the WV CLP could have the provider directly "populate" WV's PT data base with the individual laboratories results (disk and/or on-line).

2. On-site Laboratory Inspections: The WVLCP should maintain a record which lists the dates of inspections, analytes/analyte groups reviewed, certification status and the target/projected/estimated date (at least quarter) for the next on-site. Currently such information is maintained in an on-going table for Microbiology but a similar tabulation should be considered for Chemistry.

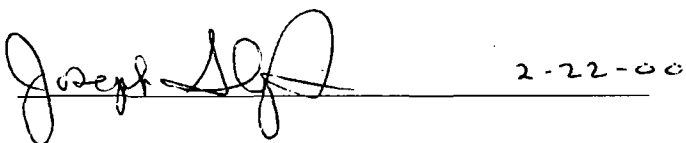
Ten laboratories will require on-site inspections for chemistry during 2000. Two of these laboratories are significantly beyond the required three year period. After the next round of chemistry inspections is completed, the WVLCP should consider working out a schedule of on-site inspections so that they do not all occur in the same year. Microbiology already has a staggered schedule.

3. Internet: The WVLCP has not had routine access to the Internet. It is growing ever more critical that the COs have access to the Internet. The EPA's web page is a vital source of information, e.g., current and projected SDWA regulations. Much information/communications within Region III are via E-Mail and such contacts are considered critically important to the Region III States' Drinking Water Programs. The Internet would be an efficient and effective way to stay in communication with and distribute information to the drinking water laboratories in WV. The laboratories should be encouraged to have access to the Internet- most will have some mode of access.

This review included a scheduled inspection of a laboratory, Bio-Chem Testing Inc., Putnam Village, Unit 23, Treys, WV 25569. Upon arrival at the laboratory, it was found that the laboratory infrequently performed SDWA analyses (only one set in over a year) and that the laboratory was unaware of new methods required by SDWA. The laboratory elected to postpone the inspection until they had come up to speed on the new methodologies; and therefore the

items listed in the NELAC standards should further help assure a quality laboratory inspection program for West Virginia.

Inspector:



2-22-00

Joseph Slayton Date

review of the WV Lab Certification-Chemistry did not include observation of an actual inspection. The WVLCP needs to assure that the laboratories in the program are informed of the current SDWA requirements. An internet/electronic mode of correspondence should be considered.

4. Documentation: The documentation for the Microbiology Certification Program was complete and well organized. The Chemistry Certification Program lacked written procedures for Lab Certification (as detailed above for Microbiology). It is suggested that an SOP/QA Manual for the drinking water laboratory certification chemistry program be prepared.

Given the reality that the current COs lack first hand experience with SDWA organic analyses, it is suggested that efforts to develop method specific checklists should be continued. These should be standardized and made available to all the COs involved (electronic format for ease of distribution and updating). Such checklists are also available from the USEPA and from other Region III State COs.

5. Personnel: Given that Dr. Morganroth alone can certify laboratories to perform organic analyses in West Virginia, it is critically important to the WV Laboratory Certification Program to assure that Mr. Larry Duffield and Mr. Greg Young are approved as Certification Officers for organic chemistry, as well as inorganic chemistry as soon as possible. In addition, since the Associated Director position serves as the central focal point for the WV Lab Certification Program, it is important that this vacancy be filled as soon as possible. The WV Laboratory Certification Program may benefit from the selection of an Associated Division Director with experience in SDWA related chemistry (especially organic chemistry).

The WVLCP should consider the benefits of providing administrative/clerical support to the chemistry and microbiology laboratory certification efforts, since the chemists and microbiologists are spending considerable time tracking and filing information. A part-time aide/clerk may benefit the program.

6. NELAC: As described previously, the WV's Laboratory Certification Program for Chemistry should be reflected in a detailed QA Manual as currently available for the Microbiology Certification Program. Also, for this update it is recommended that the laboratory consider the sections required by the National Environmental Laboratory Accreditation Conference/Program (NELAC) for a Quality Manual. The WVLCP certification manual for micriobiology already is pattern after NELAC. NELAC is an established program with consensus agreement of over 40 states and NELAC standards are consistent with international requirements for certifications of environmental laboratories, e.g., ISO 25. Information necessary for the WVLCP to apply to have its SDWA laboratory certification program approved by NELAC is available in Chapter 6, Accreditation Authorities, of the NELAC standard and the details are available on the NELAC web site at www.epa.gov\ttn\nelac. Whether WV decides to actually become an Accreditation Authority and offer Lab NELAC Accreditation or not, the

Corrective Actions

3/29/00

3/29/00

CORRECTIVE ACTION PLAN

IN

RESPONSE

TO

SDWA LAB CERTIFICATION PROGRAM

ON-SITE REVIEW

December 1-2, 1999

BY

Office of Analytical Services and Quality Assurance

FROM

WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES

OFFICE OF LABORATORY SERVICES

ENVIRONMENTAL CHEMISTRY LABORATORY

CHARLESTON, WEST VIRGINIA

West Virginia Correctivwe Action Report to SDWA Lab Certification Program On-Site Review, 12/1/99 – 12/2/99 By EPA – Region III, Office of Analytical Services and Quality Assurance

Certification Program Documentation (and Procedures/SOPs):

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West Virginia Correctivwe Action Report to SDWA Lab Certification Program On-Site Review, 12/1/99 – 12/2/99 By EPA – Region III, Office of Analytical Services and Quality Assurance

Response: Implementation of this recommended procedure will begin with this year's on-site examinations.

We now have ten in-state laboratories to audit. The initiation of a program that will more evenly spread out these on-sites for each year (over a three year period) will also be put in place this year, 2000 (instead of inspecting all ten this year). In order to do this it is anticipated that there will be four on-sites in 2000, four in 2001 and three in 2002 (one and possibly two of our certified labs will be audited every other year for a presently indefinite period of time). Records of these scheduled on-sites will be recorded as detailed in your discussion of this section.

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Response: Once the NELAC document referred to is secured work will begin on the development of a detailed and more satisfactory Quality Manual.

Additional Response to On-Site Laboratory Report (SDWA) Deviation.

H. Analytical Deviations:

General:

1. The principle WV SDWA laboratory must maintain capability and certification for all the contaminants specified in the State Primary Drinking Water Regulation, p. E-1, CLADW, unless the State has been granted wavers for compliance monitoring of these analytes or has contracted with laboratories which are SDWA certified (by EPA or by a state other than WV) for these analytes. A listing of commercial laboratories employed by the State for SDWA compliance monitoring for the analytes not measured at the WV Lab and their current SDWA Certification status (State in which they hold certification, method and analytes) is necessary to complete our records.

Response: This deviation is addressed here, rather than by an analyst, since it lies more in the realm of certification than it does in that of analytical work. A copy of the listing of commercial laboratories you are requesting can be provided at a later date. This "later date" should be no more than two to four weeks. We are in the process of developing a current listing of all laboratories that are certified by West Virginia to perform drinking water analyses under the SDWA. This should be completed shortly, however, this listing does not give the home state in which out-of-state laboratories are cerjtified, nor does it give the methods used for analyzing for the various analytes. The listing does give the address of all the laboratories on the list and the analytes or

West Virginia Correctivwe Action Report to SDWA Lab Certification Program On-Site Review, 12/1/99 – 12/2/99 By EPA – Region III, Office of Analytical Services and Quality Assurance

groupings for which they are certified by West Virginia. As soon as this additional information can be compiled with our usual listing of certified laboratories it will be forwarded to your address/attention.

LABORATORY CERTIFICATION

STANDARD OPERATING PROCEDURE

FOR

WEST VIRGINIA BUREAU OF PUBLIC HEALTH
OFFICE OF LAB SERVICES

SDWA LAB CERTIFICATION PROGRAM

2/95
BJB

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SECTION IV

EPA MANUAL FOR THE CERTIFICATION OF LABORATORIES ANALYZING DRINKING WATER - FOURTH EDITION

Updates

4/14/02

April 14, 2000

Andrea M. Labik, Sc. D.
Director
West Virginia Department of Health & Human Resources
Office of Laboratory Services
Environmental Chemistry Laboratory
Charleston, West Virginia

Re: Comments on the March 29, 2000 report entitled "Corrective Action Plan in Response to Laboratory Evaluation Report (SDWA) On-Site Evaluation" (Inorganic Chemistry and Microbiology), November 30-December 1, 1999 and "Corrective Action Plan in Response to SDWA Lab Certification program On-Site Review", December 1-2, 1999.

Dear Dr. Labik:

Thank you for the very positive response detailing correction actions from the on-site SDWA laboratory assessment. Our inspection Team greatly appreciated the professionalism and assistance you and your staff provided during the inspection. We applaud and encourage your plans and efforts to bring your laboratory facilities Internet access. Also, we are hopeful that additional assistance and coordination will be provided by filling the vacant Associate Director position. In terms of the corrective actions planned by the WV, we offer the following comments **(the items which are bolded and in enlarged font require additional consideration):**

Inorganic Chemistry:

General

1. The principle WV state SDWA laboratory must maintain capability and certification for all the contaminants specified in the State Primary Drinking Water Regulations, p. E-1 CLADW, unless the State has been granted wavers for compliance monitoring of these analytes or has contracted with laboratories which are SDWA certified (by EPA or by a state other than WV) for these analytes. A listing of commercial laboratories employed by the State for SDWA compliance monitoring for the analytes not measured at the WV Lab and their current SDWA Certification status (State in which they hold certification, method and analytes) is necessary to complete our records.

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ENVIRONMENTAL CHEMISTRY LABORATORY

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Joseph Slayton

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EPA Comment: Response clear and acceptable. **If not already included in the 2000 SDWA questionnaire please forward schedule to assessor.**

4. Documentation:

The documentation for the Microbiology Certification Program was complete and well organized. The Chemistry Certification Program lacked written procedures for Lab Certification (as detailed above for Microbiology). It is suggested that an SOP/QA Manual for the drinking water laboratory certification chemistry program be prepared.

WV Response: Although it is probably not as extensive or complete as that for the Microbiology Certification Program the Chemistry Certification Program does have an SOP/QA manual for drinking water laboratory certification. This manual is titled Laboratory Cerjtification Standard Operating Procedure for West Virginia Bureau of Public Health, Office of Laboratory Service, SDWA Lab Certification Program. A copy of the Title page and the Table of Contents has been included for your examination. This manual is badly in need of being up-dated. We have some standard letters and methods check-lists in place that really should be included in this manual.

EPA Comment: Response clear and acceptable. **Please forward a copy of the entire document.**

5. Personnel:

Given that Dr. Morganroth alone can certify laboratories to perform organic analyses in West Virginia, it is critically important to the WV Laboratory Certification Program to assure that Mr. Larry Duffield and Mr. Greg Young are approved as Certification Officers for organic chemistry, as well as inorganic chemistry as soon as possible.

WV Response: Mr. Larry Duffield's name (and additional, requested information) has been sent to Charles Jones (Region III, Philadelphia, PA) as an applicant for the Certification Officer training to be given in Cincinnati in September, 2000. This year he will be seeking certification only in the area of inorganic chemistry, however, he has verbally informed me that he would attend in 2001 for certification in the area of organic chemistry. In addition Mr. Greg Young has informed me that he would also attend a certification officers training course (for certification in the area of inorganic chemistry). This will be implemented as soon as it is practicable.

EPA Comment: Response clear and acceptable.

6. **NELAC:**

As described previously, the WV's Laboratory Certification Program for Chemistry should be reflected in a detailed QA Manual as currently available for the Microbiology Certification Program. Also, for this update it is recommended that the laboratory consider the sections required by the National Environmental Laboratory Accreditation Conference/Program (NELAC) for a Quality Manual.

WV Response: Once the NELAC document referred to is secured work will begin on the development of a detailed and more satisfactory Quality Manual.

EPA Comment: Response clear and acceptable. **A hardcopy of the standard will be FedXed 4/16/00.**

Sincerely,

Joseph Slayton

Associated Director of Science

Corrective Actions

4/14/00

CORRECTIVE ACTION PLAN

IN

RESPONSE

TO

SDWA LAB CERTIFICATION PROGRAM

ON-SITE REVIEW

December 1-2, 1999

BY

Office of Analytical Services and Quality Assurance

FROM

WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES

OFFICE OF LABORATORY SERVICES

ENVIRONMENTAL CHEMISTRY LABORATORY

CHARLESTON, WEST VIRGINIA

Comments from EPA Assessor
Joseph Slayton
April 14, 2000

Certification Program Documentation (and Procedures/SOPs):

It is readily apparent from an examination of the West Virginia Laboratory Certification Program for Chemistry that it suffers from a lack of defining procedures SOPs and documentation. In the next year to eighteen months a considerable amount time and effort will be expended in order to remedy most, if not all, of these inadequacies.

Obervations & Suggestions:

1. **Proficiency Testing (PT) Samples:** The WV Laboratory Certification Program (WVLCP) has not decided on the details of operating the new PT program (the EPA no longer provides PE/PT samples). The WVCLP should establish a schedule for laboratories to participate in Water Supply studies.

WV Response: During the on-site evaluation of our WVLCP for Chemistry I expressed our desire to set up a defining schedule in which the primary annual WS PT sample for those analytes a laboratory was seeking certification would be obtained/analyzed and the analytical results forwarded to our office for review no later than the end of the first quarter (March 31st) of each year. The make- up WS PT (for those analytes missed on the primary WS PT sample) sample would then need to be analyzed and reported to our office no later than the end of the third quarter (September 30th) of each year.

Since then I have decided that it would be better for our program if the make up PT termination date were to be set at the end of August each year rather than the end of September. This would allow more time for the recording of all PT results data (presently a time-consuming process) on each certified laboratory s index card and for an in-depth analysis of their certification status. This would materially simplify the process of sending out renewal notices/invoices by our usual target date of mid-October each year.

Such a schedule for our PT program will be documented in a written SOP covering the topics detailed in your* Observations & Suggestions. *A letter detailing the substance of this SOP will be drafted and forwarded (by registered or certifed mail) to all certified labs.

EPA Comment: Response clear and acceptable.

2. On-Site Laboratory Inspections:

The WVCLP should maintain a record which lists the dates of inspections, analytes/analyte groups reviewed, certification status and the target/projected/estimated date (at least quarter) for the next on-site.

WV Response: Implementation of this recommended procedure will begin with this year's on-site examinations.

We now have ten in-state laboratories to audit. The initiation of a program that will more evenly spread out these on-sites for each year (over a three year period) will also be put in place this year, 2000 (instead of inspecting all ten this year). In order to do this it is anticipated that there will be four on-sites in 2000, four in 2001 and three in 2002 (one and possibly two of our certified labs will be audited every other year for a presently indefinite period of time). Records of these scheduled on-sites will be recorded as detailed in your discussion of this section.

EPA Comment: Response clear and acceptable. **If not already included in the 2000 SDWA questionnaire please forward schedule to assessor.**

4. Documentation:

The documentation for the Microbiology Certification Program was complete and well organized. The Chemistry Certification Program lacked written procedures for Lab Certification (as detailed above for Microbiology). It is suggested that an SOP/QA Manual for the drinking water laboratory certification chemistry program be prepared.

WV Response: Although it is probably not as extensive or complete as that for the Microbiology Certification Program the Chemistry Certification Program does have an SOP/QA manual for drinking water laboratory certification. This manual is titled Laboratory Cerjtification Standard Operating Procedure for West Virginia Bureau of Public Health, Office of Laboratory Service, SDWA Lab Certification Program. A copy of the Title page and the Table of Contents has been included for your examination. This manual is badly in need of being up-dated. We have some standard letters and methods check-lists in place that really should be included in this manual.

EPA Comment: Response clear and acceptable. **Please forward a copy of the entire document.**

5. Personnel:

Given that Dr. Morganroth alone can certify laboratories to perform organic analyses in West Virginia, it is critically important to the WV Laboratory Certification Program to assure that Mr. Larry Duffield and Mr. Greg Young are approved as Certification Officers for organic chemistry, as well as inorganic chemistry as soon as possible.

Response: Mr. Larry Duffield's name (and additional, requested information) has been sent to Charles Jones (Region III, Philadelphia, PA) as an applicant for the Certification Officer training to be given in Cincinnati in September, 2000. This year he will be seeking certification only in the area of inorganic chemistry, however, he has verbally informed me that he would attend in 2001 for certification in the area of organic chemistry. In addition Mr. Greg Young has informed me that he would also attend a certification officers training course (for certification in the area of inorganic chemistry). This will be implemented as soon as it is practicable.

EPA Comment: Response clear and acceptable.

6. **NELAC:**

As described previously, the WV's Laboratory Certification Program for Chemistry should be reflected in a detailed QA Manual as currently available for the Microbiology Certification Program. Also, for this update it is recommended that the laboratory consider the sections required by the National Environmental Laboratory Accreditation Conference/Program (NELAC) for a Quality Manual.

Response: Once the NELAC document referred to is secured work will begin on the development of a detailed and more satisfactory Quality Manual.

EPA Comment: Response clear and acceptable. **A hardcopy of the standard will be FedXed 4/16/00.**

Corrective Actions

5/14/00

5/14/00

RESPONSE TO EPA'S COMMENTS

ON

WEST VIRGINIA'S CORRECTIVE ACTION PLAN

RELATIVE TO

THE SDWA LAB CERTIFICATION PROGRAM

RESULTING FROM THE

ON-SITE EVALUATION BY EPA REGION III EVALUATOR

December 1-2, 1999

FROM

WEST VIRGINIA DEPARTMENT OF HEALTH & HUMAN RESOURCES

OFFICE OF LABORATORY SERVICES

ENVIRONMENTAL CHEMISTRY LABORATORY

CHARLESTON, WEST VIRGINIA

REQUIRED ADDITIONAL COMMENTS TO ITEMS BOLDED IN ENLARGED FONT

11. **On-Site Laboratory Inspections:**

The WVCLP should maintain a record which lists the dates of inspections, analyses/analyte groups reviewed, certification status and the target/projected/estimated date (at least quarter) for the next on-site. **If not already included in the 2000 SDWA questionnaire please forward schedule to assessor.**

Schedule of estimated on-site dates (by quarter) was included in our response to the 2000 SDWA questionnaire.

4. **Documentation:**

The documentation for the Microbiology Certification Program was complete and well organized. The Chemistry Certification Program lacked written procedures for Lab Certification (as detailed above for Microbiology). It is suggested that an SOP/QA Manual for the drinking water laboratory certification chemistry program be prepared. **Please forward a copy of the entire document (*Laboratory Certification Standard Operating Procedure for West Virginia Bureau of Public Health, Office of Laboratory Services, SDWA Lab Certification Program).***

A copy of this document is being forwarded by separate mail.

NELAC:

As described previously, the WV's Laboratory Certification Program for Chemistry should be reflected in a detailed QA Manual as currently available for the Microbiology Certification Program. Also, for this update it is recommended that the laboratory consider the sections required by the National Environmental Laboratory Accreditation Conference Program (NELAC) for a quality Manual. **A hardcopy of the standard will be FedXed 4/16/00.**

The hard copy of the referenced NELAC document was obtained prior to 4/16/00.

Corrective Actions

Routine STATUS Reports
4/23/01 – 8/16/07

Post-it® brand

Fax Transmittal Memo 7672

To Joe Slayton		No. of Pages 6	Today's Date 4-23-01	Time
Company Assoc. Dir. of Science, EPA Region III		From Wayne Morganroth	
Location Ft. Meade, MD		Company WV Bur Pub Health, Env. Chemistry Lab	
Fax # 1-(410) 305-3095	Telephone #	Location Charleston, WV	Dept. Charge
Comments Response to your 1-03-01 E-Mail to Dr. Andrea Labik		Fax # 1-(304) 558-4143	Telephone #
		Original Disposition: ☐ Destroy ☐ Return ☐ Call for pickup	

From: Wayne Morganroth, WV Bureau of Public Health, OLS., ENV Chem. Lab
TO: Joe "Cool" Slayton, Associate Director of Science, EPA Region III, OASQA, Ft. Meade, Md.
Date: Sunday, April 22, 2001.
Subject: Tardy response to questions directed to me in your Jan 3, 2001 E-Mail to our Director, Dr. Andrea Labik.

Responses will be keyed back to numerical paragraphs in the referenced E-Mail, above.

3. a. Here-in-after our PT provider will be notified to send three copies of our results (one each) to Mr. Robert Lange, Charles Jones, Jr., and yourself. For our last WS study (ERA, was our provider) I requested they send you a copy of our results. I hope you received them.

b. Greg has had considerable difficulty with Fluoride PT samples. However, this now appears to have been resolved. Some time ago Dionex's representative for this area was in to see Greg. When they discussed these difficulties he picked up on the fact that the fluoride PT sample also contained, among other analytes, (in the PT Sample that gave Greg fits) alkalinity and calcium hardness – apparently when carbonate or bicarbonate is present it causes poor resolution of the fluoride peak from the water dip – when a carbonate-bicarbonate eluent (which we had been using) is used. The Dionex rep recommended that we explore switching to another eluent. After a considerable amount of work Greg found that a 15 mM KOH solution is a satisfactory eluent. We have not been analyzing fluoride compliance samples (since we don't receive any), but we are reporting out fluoride results (predominantly for sanitary surveys for District Engineers) via the IC method – EPA 300. I am appending Greg's MDL study for fluoride. It is well worth noting that Greg successfully analyzed our last fluoride PT sample by both IC and electrode methods.

c. Although we still do not have E-Mail access, considerable progress has been made and we probably will have E-Mail capability within 5 to 10 working days (my estimate). The necessary communication lines into the laboratory have been installed by Verizon (our phone company), cabling throughout the laboratory has been completed for some time and the router (which had to be ordered) was installed last Thursday, April 21st – all that is required now is debugging of the system – the incorporated modem is not responding properly.
We are definitely in debt to Dr. Labik for the progress the State has made in hooking us up – she has been consistently vocal within the hearing of all who would listen ("up-town" that is) that BIG Chimney desperately needed to be hooked up to the rest of the world.

d. WV's SDWA Chemistry Lab Certification Program:

1) **and 2) – Status of program and is scheduling and performance of on-site assessments on track? Status of the program is not good, but a bit better than when you were here for our last evaluation. We now have nine labs due for on-site evaluations. Of these four are the most critical and must be surveyed this year – by the end of July or August. Three of the remaining labs are our best and of least concern – these I think could be surveyed early in 2002. The remaining two would then be visited by the end of this year. This is how I feel we can get all labs back on track for triennial on-site examination. However, this may change somewhat since our section is scheduled to meet with Charlotte Billingsley on April 24, 2001 – the only topic for this meeting is our laboratory certification program and what will be our schedule for fixing/improving it.**

   I have re-kindled hope for improvement of the certification program. It has recently been possible to take a very positive step – the realization that the program suffered from a real need for secretarial help has been present for a long time, but funds were unavailable to hire the necessary help. Now the realization and the funds are present. As a consequence we are in the process of filling a permanent position for an office assistant. That will be of enormous help.

3) **With the exception of one laboratory (at two locations) our laboratories are staying on track/schedule with their PT participation. PT providers are forwarding most of the reports to our lab – a few labs (mostly out-of-state) have been forwarding copies of the reports they receive from their PT providers.**

4) **Additional SOPs/manuals available ... Greg Young in wet chemistry is in the process of revising/updating SOPs for tests for the following analytes: Alkalinity, Calcium and Calcium Hardness.**

5) **Larry Duffield (Metals analyses) successfully attended the EPA SDWA Course in Cincinnati last September – so he is now approved as a certification officer for inorganic parameters. He plans on returning to take the organic portion this fall. I had hopes that Greg Young could attend also to take the inorganic portion. However, our former blood lead analyst resigned and Greg has now become the primary blood lead chemist in addition to his duties in wet chemistry. As a consequence he has too many demands on his time to release him for an entire week – especially so since Larry is the back-up blood lead analyst.**

30-Mar-2001
11:52 AM
G. Young

MDL DAY 1 - FLUORIDE ANALYSIS

SAMPLE / STANDARD	PEAK AREA	CALCULATED CONCENTRATION (mg/L F)		
Calibration Blank	1451	r = 0.9998		
0.1 mg/L F	39899			
0.2 mg/L F	79195			
0.5 mg/L F	222932			
1.0 mg/L F	472129			
2.0 mg/L F	933042			
0.5 mg/L CHECK STANDARD	223863	0.49	98.0% Rec	(0.49/0.50)*100
FRW 1	4809	0.024		
FRW 2	2578	0.020		
FRW 3	2247	0.019		
FRW 4	2295	0.019		
FRW 5	2135	0.019		
FRW 6	2522	0.020		
FRW 7	2384	0.019		
VHG Labs (5x) TV 4.873	463155	4.99	102.0% Rec	(4.99/4.873)*100
0.5 mg/L CHECK STANDARD	223602	0.49	98.0% Rec	(0.49/0.50)*100

STANDARD DEVIATION = 0.00183
MEAN = 0.0020

MDL = 0.006 (0.00183*3.14)

FRW TV = 0.006 mg/L F

All analyses were performed using a 15 mM Potassium Hydroxide eluent solution. Suppressor current setting - 100 mA. These operating conditions give good separation of the Fluoride peak from the water dip.

Fluoride retention time 1.15 minute.
Water dip occurs at 0.9 minute.

2-Apr-2001
11:40 AM
G. Young

MDL DAY 2 - FLUORIDE ANALYSIS

SAMPLE / STANDARD	PEAK AREA	CALCULATED CONCENTRATION (mg/L F)		
Calibration Blank	1659	r = 0.9997		
0.1 mg/L F	31726			
0.2 mg/L F	66424			
0.5 mg/L F	201696			
1.0 mg/L F	438935			
2.0 mg/L F	884699			
0.5 mg/L F CHECK STANDARD	202041	0.48	96.0% Rec	('0.48/0.50)*100
FRW 1	2264	0.034		
FRW 2	1915	0.033		
FRW 3	2702	0.035		
FRW 4	2577	0.035		
FRW 5	5989	0.042		
FRW 6	1903	0.033		
FRW 7	1370	0.032		
VHG LABS (5x) TV 4.873	442127	5.08	104.0% Rec	(5.08/4.873)*100
0.5 mg/L F CHECK STANDARD	204493	0.49	98.0% Rec	('0.49/0.50)*100

STANDARD DEVIATION = 0.0033
MEAN = 0.0035

MDL = 0.01 (0.0033*3.14)

FRW TV = 0.006 mg/L F

All analyses were performed using a 15 mM Potassium Hydroxide eluent solution. Suppressor current setting - 100 mA. These operating conditions give good separation of the Fluoride peak from the water dip.

Fluoride retention time 1.15 minute.
Water dip occurs at 0.9 minute.

4-Apr-2001
11:21 AM
G. Young

MDL DAY 3 - FLUORIDE ANALYSIS

SAMPLE/STANDARD	PEAK AREA	CALCULATED CONCENTRATION (mg/L F)		
Calibration Blank	1451	r = 0.9998		
0.1 mg/L F	35927			
0.2 mg/L F	75364			
0.5 mg/L F	218881			
1.0 mg/L F	458018			
2.0 mg/L F	922306			
0.5 mg/L F CHECK STANDARD	217674	0.49	98.0% Rec	(0.49/0.50)*100
FRW 1	5029	0.031		
FRW 2	2083	0.025		
FRW 3	2869	0.026		
FRW 4	2691	0.026		
FRW 5	2677	0.026		
FRW 6	2727	0.026		
FRW 7	2840	0.026		
VHG Labs (5x) TV 4.873	460647	5.05	104.0% Rec	(5.05/4.873)*100
0.5 mg/L F CHECK STANDARD	222108	0.50	100.0% Rec	(0.49/0.50)*100

STANDARD DEVIATION = 0.00199
MEAN = 0.026

MDL = 0.006 (0.00199 * 3.14)

FRW TV = 0.006 mg/L F

All analyses were performed using a 15 mM Potassium Hydroxide eluent solution. Suppressor current setting - 100 mA. These operating conditions give good separation of the Fluoride peak from the water dip.

Fluoride retention time 1.15 minute.
Water dip occurs at 0.9 minute.

Tom Ong
<tomong@wvdhhr.org
>

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:

04/27/01 12:40 PM

Subject: WV Micro Chart

The chart should be self explanatory.

Gp I = Membrane Filtration
Gp II = Heterotrophic Plate Count (No PE's Required)
Gp III = Multi Tube Fermentation
Gp IV = Chromogenic/Fluorogenic Substrate Test

One other thought about the privatization of PE's. Some providers do not provide the date of analysis - only the Study Report Date. I think the Date of Analysis is also important.

WV On-Site WSM Schedule Rev 4

WV On-Site Evaluation and W.S.M. Schedule (Drinking Water Microbiology Only) *Rev. 4/10/01*

Laboratory	Director	Telephone	Certification Number	Last On-Site Evaluation	Next On-Site Evaluation	Last W.S.M. Study	Pass/Fail
Analabs, Inc. 196 Dayton Street Crab Orchard, WV 25827	Charles Thompson	(304) 255-4821	00442 CM	December 1-2, 1997	April 30 - May 1, 2001*	Gp. I (1/19/01) Gp. IV (12/20/00)	Pass Pass
Beckley Water Company 1006 Pluto Road Shady Springs , WV 25918	Eddie Kidd	(304) 763-2691	00411 M	February 10, 2000	2/02	Gp. IV (5/4/00)	Pass
Clarksburg Water Board 1001 South Chestnut Street Clarksburg, WV 26301	Richard Welch	(304) 624-5467	00171 CM	September 21-22, 2000	9/02	Gp. I (8/9/00) Gp. III (9/14/00) Gp. IV (6/26/00)	Pass Pass Pass
EnviroLabs, Inc. 6327 Emerson Avenue Parkersburg, WV 26101	Fred Anderson	(304) 422-4760	00542 M	January 25, 2001	1/03	Gp. I (7/10/00) Gp. IV (9/11/00)	Pass Pass
Express Analytical Services, Inc. 375 Floral Avenue Chambersburg, PA 17201	Irving M. Kipnis, Ph.D.	(717) 263-3222	9925 M	Out-Of-State Laboratory	Out-Of-State Laboratory		
Fairmont Water Plant Filtration Plant - Morris Park Fairmont, WV 26555-1428	Doug Amos	(304) 366-1461	00251 M	September 18-19, 2000	9/02	Gp. I (8/15/00) Gp. I (10/5/00) Gp. IV (8/16/00)	Fail Pass Pass
Fredericktowne Labs, Inc, 3039-C Ventrie Court Myersville, MD 21773	Mary L. Miller, Ph.D.	(301) 293-3340	9924 M	Out-Of-State Laboratory	Out-Of-State Laboratory		
Hydrochem Laboratories, Inc. Rt. 18 and First Street Shenandoah Junction, WV 25442	Herbert S. Snyder	(304) 725-6174	00191 M	September 30, 1999	9/01	Gp. IV (6/1/00)	Pass
Joiner Micro Laboratories, Inc. 77-F West Lee Street Warrenton , VA 20186	Robyn Joiner	(540) 347-7212	9934 M	Out-Of-State Laboratory	Out-Of-State Laboratory	Dropped Certification in 2000	
McCoy & McCoy Laboratories, Inc. 117 Island Creek Road Pikeville, KY 41501	Chris Howell	(606) 432-3104	9928 CM	Out-Of-State Laboratory	Dropping Certification for 2000	Dropped Certification in 2000	
Mid Atlantic Laboratories, Inc. 224 Main St., Suite 1 Port Royal, VA 22535	Sylvia C. Storke	(703) 775-7775	9926 M	Out-Of-State Laboratory	Out-Of-State Laboratory		

*CONFIRMED

Laboratory	Director	Telephone	Certification Number	Last On-Site Evaluation	Next On-Site Evaluation	Last W.S.M. Study	Pass/Fail
Morgantown Utility Board Robert B. Creel Water Treatment Facility 171 S. University Avenue Morgantown, WV 26505	Greg Shellito	(304) 296-4322	00311 M	September 7-8, 2000	9/02	Gp. I (10/13/00) Gp. IV (10/13/00)	Pass Pass
REI Consultants, Inc. 225 Industrial Park Road Beaver, WV 25813	James L. Hern, Ph.D.	1-800-999-0105	00412 CM	February 8-9, 2000	2/02	Gp. I (6/1/00) Gp. IV (9/14/00)	Pass Pass
Reliance Laboratories, Inc. One Eagle Plaza,, Suite I Hedgesville, WV 25427	William Kirk, Jr.	(304) 754-7360	00443 CM	September 30, 1999	9/01	Gp. IV ( )	Passed Due
Reliance Laboratories, Inc. 10 Benedum Airport Industrial Park Bridgeport, WV 26330	William Kirk, Jr.	(304) 842-5285	00354 CM	September 20-21, 2000	9/02	Gp. I (12/20/00) Gp. IV (12/20/00)	Pass Pass
Shenandoah Bacteriological Laboratory 434 Reynolds Road Cross Junction, VA 22625	Greg Jones	1-888-888-4505	9941 M	Out-Of-State Laboratory	Out-Of-State Laboratory		
Sturm Environmental Services Brushy Fork Road Bridgeport, WV 26330	David W. Fisher	(304) 623-6549	00172 CM	March 22-23, 2001	3/03	Gp. IV (2/13/01	Pass
Touchstone Research Laboratory, Ltd. The Millenium Centre Triadelphia, WV 26059	Michael Thurston	(304) 547-5800	00352 M	August 13, 1997	Dropping Certification for 2000		
Tradet Laboratories, Inc. RD 2, Box 227A, Battle Run Road Triadelphia, WV 26003	Richard P. Whitt	(304) 547-9094	00353 M	November 1-2, 1999	11/01	Gp. I ( ) Gp. IV (1/19/01)	Passed Due Pass
Water Environmental Testing Corner of Route 14 & Blair Ave. Mineral Wells, WV 26150	James C. Wright	(304) 489-1060	00541 M	May 30-31, 2000	5/02	Gp. I (11/17/00) Gp. IV (10/13/00)	Pass Pass
Weirton Water Treatment Plant 3031 Birch Drive Weirton, WV 26062	Jeff Pearce	(304) 797-8566	00051 M	December 14-15, 2000	12/02	Gp. I (6/26/00) Gp. III (7/24/00)	Pass Pass
Weirton Steel Corporation 400 Three Springs Drive - QA Weirton, WV 26062	Paul Sobutka	(304) 797-2658	00052 M	November 10-11, 1997	Dropping Certification for 2000		

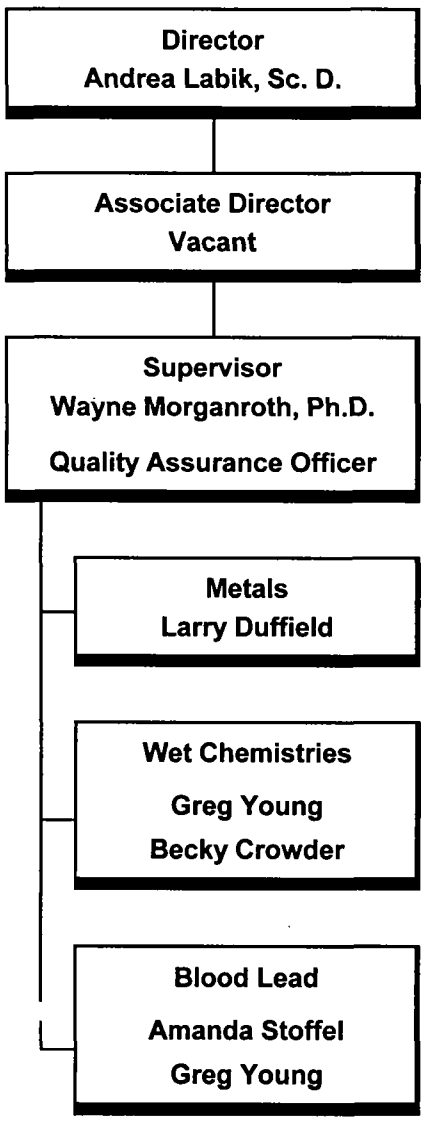
***CONFIRMED**

Laboratory	Director	Telephone	Certification Number	Last On-Site Evaluation	Next On-Site Evaluation	Last W.S.M. Study	Pass/Fail
West Virginia Department of Health Office of Laboratory Services Environmental Microbiology Section 167 - 11th Avenue South Charleston, WV 25302	Andrea Labik, Sc.D.	(304) 558-3530	00003 M	November 30- December 1, 1999		Gp. I (3/8/01) Gp. III (1/22/01) Gp. IV (1/16/01)	 Pass Pass
West Virginia Department of Health Region 9 District Health Office 44 Wiltshire Rd. Kearneysville, WV 25430	Elizabeth Karickhoff	(304) 725-5832	00005 M	September 28-29, 1999	9/01		
Wheeling Water Treatment Plant 1305 Richland Avenue Wheeling, WV 26003	Philip Kowalski	(304) 234-3835	00351 CM	November 8-9, 2000	11/02	Gp. I (5/16/00) Gp. III (5/16/00)	Pass Pass
WVAWC - Huntington 24th Street and Ohio River Road Huntington, WV 25710	Dave Peters	(304) 525-8193	00061 M	March 23-24, 2000	3/02	Gp. I ( ) Gp. IV (12/20/00)	Passed Due Pass
WVAWC - Kanawha Valley Court and Dryden Streets Charleston, WV 25301	Teri Merrifield	(304) 340-2037	00201 CM	September 8-9, 1999	9/01	MF (2/18/00) HPC (1/28/00)	Pass Pass
WVAWC - Montgomery 148 - 6th Avenue Montgomery, WV 25136	Teri Merrifield	(304) 442-9728	00101 M	February 10-11, 1997	Dropping Certification for 2000		
WVAWC - New River Plant 300 Bachman Road Beckwith, WV 25840	Marshall Murray	(304) 574-4075	00102 M	New Facility			
WVAWC - Oak Hill 225 Jones Avenue Oak Hill, WV 25901	Marshall Murray	(304) 465-0682	00102 M	December 11-12, 1997	12/00 Closed - Moved To New River Plant in 2001	Gp. I (12/20/00)	Pass
WVAWC - Bluestone 227 Edwards Road True, WV 25988	Dave Thomas	(304) 466-5050	00446 M	May 7-8. 1998	June 21-22, 2001*	Gp. I (11/17/00)	Pass
WVAWC - Bluefield RR 2, Box 425 A Bluefield, WV 24701	Dave Thomas	(304) 327-8913	00282 M	December 4-5, 1997	May 31-June 1, 2001*	Gp. I (11/17/00)	Pass
WVAWC - Weston R.R. 2, Box 192 Weston, WV 26452	Billie Suder	(304) 269-1804	00211 M	October 12-13, 2000	10/02	Gp. I (12/20/00)	Pass

*CONFIRMED

WEST VIRGINIA BUREAU OF PUBLIC HEALTH
OFFICE OF LABORATORY SERVICES

ENVIRONMENTAL CHEMISTRY
BIG CHIMNEY, WV



ENV CHEM/SB/wgt-10/25/2000

Wayne Morganroth
<waynemorganroth@wvdhhr.org>

05/22/01 12:59 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:

Subject: Monthly status updates of on-site assessments of WV in-state laboratories.

Joe: Sorry that I've left you with the impression that: a. I didn't get or ignored your 5/5/01 E-Mail message relating to the subject, and b. Updates wouldn't be forth-coming. That was my fault since I tend to shy away from E-mailing since I am definitely a novice in that area. What I had been planning on doing (in a vacuum from your perspective) was sending a monthly update at the conclusion of on-site activity for that month. As a pre-monthly up-date - I will be doing the first of our on-sites tomorrow morning - at WV American Water Co's laboratory in Charleston. Since I will be doing both the inorganic and organic portions I will be going there at least one more time in June. Next week I will be forwarding you the first monthly up-date. I think the idea of using monthly "corrections" to the "status table" (I FAXed you earlier) should greatly simplify up-dating. Wayne Morganroth.

May 2, 2001

State of West Virginia
SDWA Laboratory Certification Status Table

Name of Laboratory	Date (Year) of Last On-Site Evaluation	Scheduled Date for Next On-Site	Reason for Scheduling Two On-sites in 2002	Laboratory On-Track With WS Studies?
A. C. & S., Inc.	New Lab, Interim Cert.	July 2001 (WM)		On-Track
Analabs, Inc.	1994	June 2001 (WM)		On-Track
Clarksburg Water Bd.	1997	Tent. Sept 2001 (WM)*		On-Track
C T & E, Env Div	1997	Mar 2002 (LD & WM)*	CO's Schedules Too Tight for 2001 On-Site	On-Track
REI Consultants, Inc.	1997	Apr 2002 (LD & WM)*	CO's Schedules Too Tight for 2001 On-Site	On-Track
Reliance Labs, Inc. Bridgeport, WV	1997	October 2001 (LD & WM)		Deficient-Must Be Corrected By 7-1-01
Reliance Labs, Inc. Hedgesville, WV	1995	July 2001 (LD)		Deficient-Must be Corrected by 7-1-01
Sturm Env Services	1997	Tent. Sept 2001 (WM)*		On-Track
WV-American Water Charleston, WV	1997	May/June 2001 (WM)		On-Track
Wheeling Water Trtm't	1997	Tent. Aug 2001 (WM)*		On-Track

- **The dates for these on-sites are tentative – they were not set in our meeting on 4-24-01 – they were set (suggested) by WM.**
- **Larry Duffield's schedule is quite tight due to analytical work, up-coming WS Study (May-June) and CO Training Course in September, 2001.**
- **Initials of certification officers Larry Duffield (LD) and Wayne Morganroth (WM) have been appended to 2001 Schedule to Indicate the Certification Officer(s) that are to perform the on-site evaluations .**

Wayne Morganroth
<waynemorganroth@
wvdhhr.org>

06/01/01 03:17 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:

Subject: Monthly on-site certification update

Joe. The on-site survey of WV American Water Co. Lab in Charleston was conducted May 23, 2001. This was a survey that was made to consider adding HAA's to their certified parameters list. Since was the first lab I have examined for HAA's I wanted to a rather thorough job of looking at data, pro-cedure and record keeping. Their schedule is so full that I was not able to immediately conduct the remaining portion of the on-site until June 18-19, 2001. Since I will be lookong at both inorganic and organic information I have requested two days for the rest of the on-site. Incidentally, their HAA analyst is good, and has done a thorough job - IDC and MDL studies, PE results, SOP, and record keeping all look very good.

I am including an amended (updated) copy of the Laboratory Certification Status Table, as you suggested. This copy has been corrected from the one I FAXed you some time ago. The earlier version was a bit obscure. This table was formulated in MS Word - when I attempted to make an asterisked footnote it automatically put in as a bulleted note instead. This may have then left you, or any reader, with the idea that all scheduled on-sites were tentative. Instead those that were un-asterisked were set in our meeting of April 24, 2001 with Charlotte Billingsley, and were considered to be on-sites that were scheduled for implementation. Prior to sending the table to you I neglected to proof it thoroughly. Wayne Morganroth

SDWA Lab Certification Status - Joe

May 2, 2001

State of West Virginia
SDWA Laboratory Certification Status Table

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Analabs, Inc.	1994	June 2001 (WM)		On-Track
Clarksburg Water Bd.	1997	Tent. Sept 2001 (WM)*		On-Track
C T & E, Env Div	1997	Mar 2002 (LD & WM)*	CO's Schedules Too Tight for 2001 On-Site	On-Track
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WV-American Water Charleston, WV	1997	June 18-19, 2001 (WM)		On-Track
Wheeling Water Trtm't	1997	Tent. Aug 2001 (WM)*		On-Track

* The dates for these on-sites are tentative – they were not set in our meeting on 4-24-01 – they were set (suggested) by WM. The remaining on-sites were scheduled in our meeting on 4-24-01.

Larry Duffield's schedule is quite tight due to analytical work, up-coming WS Study (May-June) and CO Training Course in September, 2001.

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Joe Slayton

08/13/01 05:44 PM

To: Wayne Morganroth <waynemorganroth@wvdhhr.org>

cc:

cc: Joe Slayton/ESC/R3/USEPA/US@EPA, Andrea Labik <andrealabik@wvdhhr.org>

Subject: Re: June 2001 Lab Certification Update

Wayne...how is it going. got a new update for the table?
Wayne Morganroth <waynemorganroth@wvdhhr.org>

Wayne Morganroth <waynemorganroth@wvdhhr.org>

07/09/01 11:29 AM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc: Andrea Labik <andrealabik@wvdhhr.org>

Subject: June 2001 Lab Certification Update

Joe. Here's a brief explanation to changes on the attached Lab Certification Status Table - since the on-site with A. C. & S., Inc. will require more preparation than any that I have scheduled for 2001, I have moved back the date for this on-site examination to September, 2001 as a means of having more time for pre-survey preparation. In its place I have scheduled an on-site for Clarksburg Water Board on July 31, 2001. In addition for July I have scheduled an on-site for Analabs, Inc. on July 17 and 19, 2001.

Larry Duffield has completed preparations for his on-site evaluation of Reliance Labs' facility in Hedgesville, WV on July 26 and 27, 2001.

I Completed the on-site evaluation of WV-American Water Co. Lab in Charleston, WV on June 28, 2001. Due to scheduling difficulties (on the part of both parties) it was necessary to move the originally scheduled date of June 19 to June 28. This lab has made a great deal of improvement since their last on-site survey. Wayne Morganroth

June '01 Lab Cert Upda

July 9, 2001

State of West Virginia
SDWA Laboratory Certification Status Table

Name of Laboratory	Date (Year) of Last On-Site Evaluation	Scheduled Date for Next On-Site	Reason for Scheduling Two On-sites in 2002	Laboratory On-Track With WS Studies?
A. C. & S., Inc.	New Lab, Interim Cert.	September 2001 (WM)		On-Track
Analabs, Inc.	1994	July 17 & 19, 2001 (WM)		On-Track
Clarksburg Water Bd.	1997	July 31, 2001 (WM)		On-Track
C T & E, Env Div	1997	Mar 2002 (LD & WM)*	CO's Schedules Too Tight for 2001 On-Site	On-Track
REI Consultants, Inc.	1997	Apr 2002 (LD & WM)*	CO's Schedules Too Tight for 2001 On-Site	On-Track
Reliance Labs, Inc. Bridgeport, WV	1997	October 2001 (LD & WM)		Have ordered WS-58 PT Samples from ERA
Reliance Labs, Inc. Hedgesville, WV	1995	July 26 & 27, 2001 (LD)		Have ordered WS-58 PT Samples from ERA
Sturm Env Services	1997	Tent. Sept 2001 (WM)*		On-Track
WV-American Water Charleston, WV	1997	June 18 & 28, 2001 (WM)		On-site examination of lab completed 6-28-01.
Wheeling Water Trtm't	1997	Tent. Aug 2001 (WM)*		On-Track

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Wayne Morganroth
<waynemorganroth@wvdhhr.org>

07/09/01 11:29 AM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc: Andrea Labik <andrealabik@wvdhhr.org>

Subject: June 2001 Lab Certification Update

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June '01 Lab Cert Upda

Joe Slayton

11/26/01 04:52 PM

To: Waynemorganroth@wvdhhr.org
cc: andrealabik@wvdhhr.org, Jason Gambatese/R3/USEPA/US,
cc:
Subject: Re: Certification status up-date for August 2001

How are things going with the SDWA Lab Cert Program? This attached update from August 14th and an inspection scheduled in the interim for AC&S aaaaaand Wheeling Water Trtm't. What is the status. Also Larry indicated you hoped to be complete the SOP for the program by Christmas is this still on track?

----- Forwarded by Joe Slayton/ESC/R3/USEPA/US on 11/26/01 04:52 PM -----

Joe Slayton

08/17/01 03:36 PM

To: Wayne Morganroth <waynemorganroth@wvdhhr.org>
cc:
Subject: Re: Certification status up-date for August 2001

got it too
Wayne Morganroth <waynemorganroth@wvdhhr.org>

Wayne Morganroth <waynemorganroth@ wvdhhr.org>

08/16/01 04:18 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA
cc: Andrea Labik <andrealabik@wvdhhr.org>
Subject: Certification status up-date for August 2001

Joe,

I goofed - forgot to include the update table as an attachment. So am sending it along now. Wayne

August 2001 Certification Up-date Stat

August 14, 2001

State of West Virginia
SDWA Laboratory Certification Status Table

Name of Laboratory	Date (Year) of Last On-Site Evaluation	Scheduled Date for Next On-Site	Reason for Scheduling Two On-sites in 2002	Laboratory On-Track With WS Studies?
A. C. & S., Inc.	New Lab, Interim Cert.	October 2001 (WM)		On-Track
Analabs, Inc.	1994	July 17 & 19, 2001 (WM)		On-Track – On-site Performed 7-17 & 7-19
Clarksburg Water Board	1997	July 31, 2001 (WM)		On-Track – On-site Performed 7-31
C T & E, Env Div	1997	Mar 2002 (LD & WM)*	CO's Schedules Too Tight for 2001 On-Site	On-Track
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Reliance Labs, Inc. Hedgesville, WV	1995	July 26 & 27, 2001 (LD)		Have completed ERA WS-58 PT, On-site Completed 7-27
Sturm Env Services	1997	Tent. Sept 2001 (WM)*		On-Track
WV-American Water Charleston, WV	1997	June 18 & 28, 2001 (WM)		On-site examination of lab completed 6-28-01.
Special Analytical Services	New In-state Lab Seeking Certification	On-site Investigation Performed 8-8-01 WM		On Track – Initial WS PT Results Excellent
Wheeling Water Trtm't	1997	September 26, 2001		On-Track

* The dates for these on-sites are tentative – they were not set in our meeting on 4-24-01 – they were set (suggested) by WM. The remaining on-sites were scheduled in our meeting on 4-24-01.

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Initials of certification officers Larry Duffield (LD) and Wayne Morganroth (WM) have been appended to 2001 Schedules to Indicate the Certification Officer(s) that are to perform (or have performed) the on-site evaluations .

Joe, We are still making progress with the SDWA Certification Program, but has been slower than during the summer months. The two projected on-sites tentatively scheduled for September 2001 (Sturm Environmental Services and Wheeling Water Treatment Laboratory) have both been performed (see the attached, up-dated Certification Status Table for survey dates). The on-site date for Reliance Labs in Bridgeport is now scheduled for December 13-14,2001. Hopefully we (Larry Duffield and I will both be performing this on-site will need only one day, the 13th, but I have asked for a second day to be sure we will have sufficient time to perform a creditable investigation. We had previously tentatively scheduled this latter on-site for October 25, 2001. However, during that time, and for some time thereafter, usage of OLS's state car was so booked up that we were unable to make the trip. Recently the car has been freed up permitting a re-scheduling of the Reliance on-site. Because of the imminent holidays, and the fact that I am asking for annual leave the latter two weeks of this month, we will not be surveying any more labs until January 2002. My goal is to complete all on sites that are over-=due by April 1, 2002 - sooner if at all possible. Then at that point we could spread our total on-site visits over a three year period - like you recommended during our last on-site in November and December 1999.

In addition - one more observation; because of my absence from our shop it is highly unlikely that our SOP for our certification program will be finished by Christmas. I have been working on it and I will try to finish it before leaving on annual leave.

One further topic I wanted to mention - you had mentioned during the telephone conference call while the Directors and Certification Officers meeting was in progress that we might be able to secure the services of Dan Arnold to assist with on-site surveys - particularly with regard to examining laboratories' competency for the performance of organic analyses. No one here feels comfortable with such a solution - first of all the on-site investigations Dan performs are in another water program altogether - would he need to attend at least a refresher course in the SDWA program? That is before he could effectively help us. In addition I talked to Dan about another matter approximately three to fours months ago - at that time I learned that their program's works load appears to be as bad or worse than ours - I believe he told me that they have 110 to 120 laboratories that they certify. I Don't see how he would have the time to help us.

Wayne

Joe Slayton
11/26/01 04:52 PM

To: Waynemorganroth@wvdhhr.org
cc: andrealabik@wvdhhr.org, Jason Gambatese/R3/USEPA/US,
bcc:
Subject: Re: Certification status up-date for August 2001

Wayne Morganroth
<waynemorganroth@
wvdhhr.org>

To: Joe Slayton/ESC/R3/USEPA/US@EPA
cc:
Subject: Certification Status Up-Date

12/05/01 08:26 PM

Joe, We are still making progress with the SDWA Certification Program, but has been slower than during the summer months. The two projected on-sites tentatively scheduled for September 2001 (Sturm Environmental Services and Wheeling Water Treatment Laboratory) have both been performed (see the attached, up-dated Certification Status Table for survey dates). The on-site date for Reliance Labs in Bridgeport is now scheduled for December 13-14,2001. Hopefully we (Larry Duffield and I will both be performing this on-site will need only one day, the 13th, but I have asked for a second day to be sure we will have sufficient time to perform a creditable investigation. We had previously tentatively scheduled this latter on-site for October 25, 2001. However, during that time, and for some time thereafter, usage of OLS's state car was so booked up that we were unable to make the trip. Recently the car has been freed up permitting a re-scheduling of the Reliance on-site. Because of the imminent holidays, and the fact that I am asking for annual leave the latter two weeks of this month, we will not be surveying any more labs until January 2002. My goal is to complete all on sites that are over-=due by April 1, 2002 - sooner if at all possible. Then at that point we could spread our total on-site visits over a three year period - like you recommended during our last on-site in November and December 1999.

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Wayne

December 2001 Certification Up-date Status Tab

December 5, 2001

State of West Virginia
SDWA Laboratory Certification Status Table

Name of Laboratory	Date (Year) of Last On-Site Evaluation	Scheduled Date for Next On-Site	Reason for Scheduling Two On-sites in 2002	Laboratory On-Track With WS Studies?
A. C. & S., Inc.	New Lab, Interim Cert.	Latter half Jan 2002		On-Track
Analabs, Inc.	1994	July 17 & 19, 2001 (WM)		On-Track – On-site Performed 7-17 & 7-19
Clarksburg Water Board	1997	July 31, 2001 (WM)		On-Track – On-site Performed 7-31
C T & E, Env Div	1997	Mar 2002 (LD & WM)*	CO's Schedules Too Tight for 2001 On-Site	On-Track
REI Consultants, Inc.	1997	Apr 2002 (LD & WM)*	CO's Schedules Too Tight for 2001 On-Site	On-Track
Reliance Labs, Inc. Bridgeport, WV	1997	December 13 & 14 2001 (LD & WM)		Have completed ERA WS-58 PT Study
Reliance Labs, Inc. Hedgesville, WV	1995	On-Site Completed July 26 & 27, 2001 (LD)		Have completed ERA WS-58 PT, On-site Completed 7-27
Sturm Env Services	1997	On-Site Completed Sept 18 & 20, 2001		On-Track
WV-American Water Charleston, WV	1997	June 18 & 28, 2001 (WM)		On-site examination of lab completed 6-28-01.
Special Analytical Services	New In-state Lab Seeking Certification	On-site Investigation Performed 8-8-01 WM		On Track – Initial WS PT Results Excellent
Wheeling Water Treatment Lab	1997	On-Site Completed September 26, 2001		On-Track

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August 14, 2001

State of West Virginia
SDWA Laboratory Certification Status Table

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Wayne Morganroth <waynemorganroth@wvdhhr.org>

08/16/01 04:11 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc: Andrea Labik <andrealabik@wvdhhr.org>

Subject: Certification status up-date

Joe,

Sorry this up-date is arriving late. I've been a bit busy. I wanted to schedule another on-site for August, but have been unsuccessful. I was able to get Wheeling Water Treatment scheduled for September 26th and will try to schedule Sturm for September too.

Although it doesn't show on the up-date table Test America (Orlando, FL) was certified in July for all chemical parameters we certify for. Wayne

Corrective Actions

Ex. 5 - Deliberative

Regional SDWA Laboratory Certification Review Questionnaire:

Completed by: Thomas L. Ong **Title:** Microbiologist Supervisor **Date:** 5/31/02

Phone: (304) 558-3530 **Fax:** (304) 558-2006 **Email:** tomong@wvdhhr.org

Organization/Address: West Virginia Department of Health & Human Resources
Bureau for Public Health
OFFICE OF LABORATORY SERVICES
167 - 11th Avenue
South Charleston, WV 25303

(These questions are provided in addition to those from the yearly questionnaire from OGWDW regarding the number of in State and out of State laboratories certified for microbiology, chemistry and radiochemistry)

1. Provide a listing of all Microbiology laboratories your State certifies and the date of the last on-site inspection and the projected date for the next on-site inspection.

See Attached Schedule

2. Provide a listing of all Chemistry laboratories your State certifies and the date of the last on-site inspection and the projected date for the next on-site inspection.

3. Provide a listing of all Rad Chemistry laboratories your State certifies and the date of the last on-site inspection and the projected date for the next on-site inspection.

Rad Chemistry certification is handled through the Office of Environmental Health Services. The only laboratory that is listed as being certified by the state of West Virginia is:

KNL
P.O. Box 1833
Tampa, FL 33601
(813) 229-2879

4. Does your State have the resources to carry out the certification program properly (on-sites, PT tracking, certification tracking, issuance of certifications)? What are the major bottlenecks/problems/shortfalls?

For the Microbiology Program, the state does have the resources to carry out the program. Tracking of PT Studies can become somewhat difficult due to the fact that the labs are not on any particular schedule (as long as studies for each certified method is participated in annually) and they can pick from any of the certified PT study providers.

5. **EPA requires laboratories to pass a PT for each contaminant by each method, each year for which they are seeking certification. Who in your State keeps the PT data for the private laboratories? Are they checking to be sure the private laboratories pass a PT for contaminants by each method each year for which they are seeking certification? How does your State track the PT performance of laboratories? Is their an electronic database?**

Yes, laboratories certified for microbiology must pass a PT for each method they are certified for on an annual basis. Thomas L. Ong and Joyce Vance-Abshire (the micro certification officers) keep track of the PT Data. Notices are sent to laboratories who fail a PT study or fail to participate in a study. PT studies are tracked on a chart and there is currently no electronic database.

The requirement for micro PT studies began two years ago. 2002 is only the 3rd year for them and some of the problems are still being worked out.

6. **Do you have any comments, good or bad, about the new privatized PT program? Are the providers including all the necessary information on their reports to you?**

Some providers only provide the date of the study completion and not the date that the analysis took place. This becomes confusing when a lab performs a PT Study in December, but the closing date for the study isn't until January.

7. **Where does your State get their PT samples? Is the State satisfied with them?**

Environmental Resource Associates. No complaints.

8. **What schedule does your State follow for PTs, e.g., specified time of year for studies and make-up studies?**

For the Micro PT Studies, Multi Tube and Chromogenic/Fluorogenic Substrate [Collilert] are analyzed in January (MTF is a part of December's Study and Chromogenic/Fluorogenic Substrate Test [Colilert] is January's study) and Membrane Filtration is done in February. So far no make-ups have been necessary. In the unlikely event that a failure would occur, then a make-up set would be immediately ordered.

9. **List your State's SDWA Certification Officers and their education and related experience.**

Microbiology:

Certification Officer	Thomas L. Ong	Joyce Vance-Abshire
Laboratory Position	Microbiologist Supervisor	Microbiologist III

Education	B.S. Biology	B.S. Biology
Certification Experience	10 Years (also certified by the FDA to inspect Grade A Dairy Laboratories - 3/92)	3 Years
Attended Drinking Water Certification Course at EPA Center in Cincinnati, OH	July 1992	July 1999
Drinking Water Experience	13 Years	9 Years

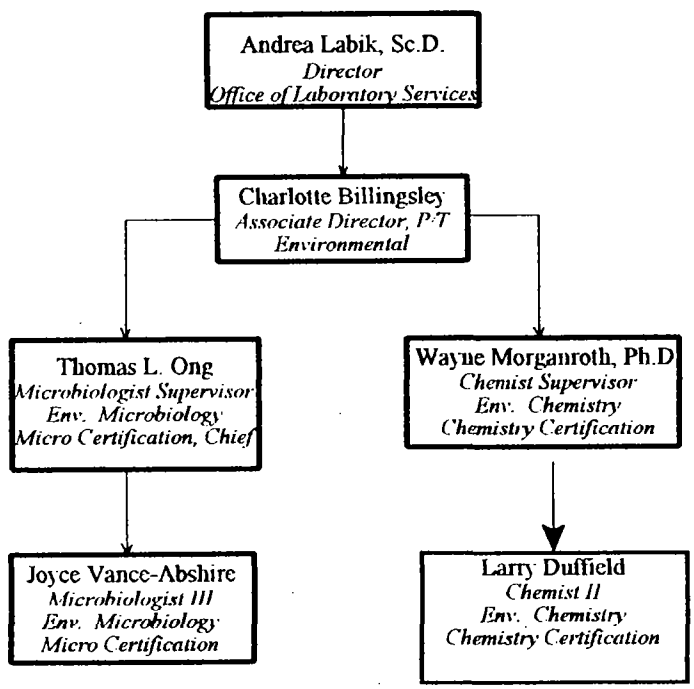
10. List training provided to SDWA Certification Officers in the last year.

Thomas L. Ong attended the Region III CO Meeting at Fort Meade in August of 2001.

11. List training provided by State to SDWA certification community in the last year?

In July of 2001, a presentation on Water Bacteriological Testing was conducted for the Class III Water Plant Operators Course. Some of the operators may work in plants that have a state certified drinking water bacteriological laboratory.

12. Provide an organizational structure of the State's Lab Certification Program and indicate to what program element/s it reports.



13. Provide a description of the certification procedures including downgrading criteria and process. (Note: if your State follows the Lab Cert Manual indicated revision and section/page number). Please indicate if you have written Quality Manuals/SOPs for your lab certification program and provide their titles.

For microbiology, West Virginia follows the guidelines set forth in the EPA's *Manual for the Certification of Laboratories Analyzing Drinking Water*, Fourth Edition, March 1997. Chapter III, pages III-7 thru III-9.

14. List any certification downgrading or upgrading actions in the last year with reasons for those actions.

None

15. List topics you would like on the next Region 3 SDWA CO's Meeting Agenda or for the national LabCert bulletin.

1. Emerging microbiological pathogens and testing protocols.

2. Bioterrorism and protecting the Drinking Water Supply.

WV On-Site Evaluation and W.S.M. Schedule (Drinking Water Microbiology Only) *Rev. 5-31-02*

Laboratory	Director	Telephone	Certification Number	Last On-Site Evaluation	Next On-Site Evaluation	Last W.S.M. Study	Pass/Fail
Analabs, Inc. 196 Dayton Street Crab Orchard, WV 25827	Charles Thompson	(304) 255-4821	00442 CM	June 11, 2001	6/03	Gp. I (1/19/01) Gp. IV (12/20/00)	Pass Pass
Beckley Water Company 1006 Pluto Road Shady Springs , WV 25918	Eddie Kidd	(304) 763-2691	00411 M	February 10, 2000	3/02	Gp. IV (4/22/02)	Pass
Clarksburg Water Board 1001 South Chestnut Street Clarksburg, WV 26301	Richard Welch	(304) 624-5467	00171 CM	September 21-22, 2000	8/02	Gp. I (10/19/01) Gp. III (9/14/01) Gp. IV (7/12/01)	Pass Pass Pass
EnviroLabs, Inc. 6327 Emerson Avenue Parkersburg, WV 26101	Fred Anderson	(304) 422-4760	00542 M	January 25, 2001	8/03	Gp. I (7/10/00) Gp. IV (9/11/00)	Pass Pass
Express Analytical Services, Inc. 375 Floral Avenue Chambersburg, PA 17201	Irving M. Kipnis, Ph.D.	(717) 263-3222	9925 M	Out-Of-State Laboratory	Out-Of-State Laboratory		
Fairmont Water Plant Filtration Plant - Morris Park Fairmont, WV 26555-1428	Doug Amos	(304) 366-1461	00251 M	September 18-19, 2000	8/02	Gp. IV (11/15/01)	Pass
Fredericktowne Labs, Inc, 3039-C Ventrie Court Myersville, MD 21773	Mary L. Miller, Ph.D.	(301) 293-3340	9924 M	Out-Of-State Laboratory	Out-Of-State Laboratory		
Hydrochem Laboratories, Inc. Rt. 18 and First Street Shenandoah Junction, WV 25442	Herbert S. Snyder	(304) 725-6174	00191 M	September 30, 1999	9/02	Gp. IV (6/1/00)	Pass
Joiner Micro Laboratories, Inc. 77-F West Lee Street Warrenton , VA 20186	Robyn Joiner	(540) 347-7212	9934 M	Out-Of-State Laboratory	Out-Of-State Laboratory	Dropped Certification in 2000	
McCoy & McCoy Laboratories, Inc. 117 Island Creek Road Pikeville, KY 41501	Chris Howell	(606) 432-3104	9928 CM	Out-Of-State Laboratory	Dropping Certification for 2000	Dropped Certification in 2000	
Mid Atlantic Laboratories, Inc. 224 Main St., Suite 1 Port Royal, VA 22535	Sylvia C. Storke	(703) 775-7775	9926 M	Out-Of-State Laboratory	Out-Of-State Laboratory		

***CONFIRMED**

Laboratory	Director	Telephone	Certification Number	Last On-Site Evaluation	Next On-Site Evaluation	Last W.S.M. Study	Pass/Fail
Morgantown Utility Board Robert B. Creel Water Treatment Facility 171 S. University Avenue Morgantown, WV 26505	Greg Shellito	(304) 296-4322	00311 M	September 7-8, 2000	8/02	Gp. I (3/02) Gp. IV (12/01)	Pass Pass
REI Consultants, Inc. 225 Industrial Park Road Beaver, WV 25813	James L. Hern, Ph.D.	1-800-999-0105	00412 CM	February 8-9, 2000	2/03	Gp. I (8/15/01) Gp. IV (6/18/01)	Pass Pass
Reliance Laboratories, Inc. One Eagle Plaza,, Suite I Hedgesville, WV 25427	William Kirk, Jr.	(304) 754-7360	00443 CM	September 30, 1999	9/02	Gp. IV (5/18/01)	Pass
Reliance Laboratories, Inc. 10 Benedum Airport Industrial Park Bridgeport, WV 26330	William Kirk, Jr.	(304) 842-5285	00354 CM	September 20-21, 2000	8/02	Gp. I (12/20/00) Gp. IV (12/20/00)	Pass Pass
Shenandoah Bacteriological Laboratory 434 Reynolds Road Cross Junction, VA 22625	Greg Jones	1-888-888-4505	9941 M	Out-Of-State Laboratory	Out-Of-State Laboratory		
Sturm Environmental Services Brushy Fork Road Bridgeport, WV 26330	David W. Fisher	(304) 623-6549	00172 CM	March 22-23, 2001	3/03	Gp. IV (9/14/01)	Pass
Touchstone Research Laboratory, Ltd. The Millenium Centre Triadelphia, WV 26059	Michael Thurston	(304) 547-5800	00352 M	August 13, 1997	Dropping Certification for 2000		
Tradet Laboratories, Inc. RD 2, Box 227A, Battle Run Road Triadelphia, WV 26003	Richard P. Whitt	(304) 547-9094	00353 M	November 1-2, 1999	11/02	Gp. I (12/01) Gp. IV (9/14/01)	Pass Pass
Water Environmental Testing Corner of Route 14 & Blair Ave. Mineral Wells, WV 26150	James C. Wright	(304) 489-1060	00541 M	May 30-31, 2000	5/03	Gp. I (12/01) Gp. IV (12/01)	Pass Pass
Weirton Water Treatment Plant 3031 Birch Drive Weirton, WV 26062	Jeff Pearce	(304) 797-8566	00051 M	December 14-15, 2000	12/02	Gp. I (12/01) Gp. III (8/14/01)	Pass Pass
Weirton Steel Corporation 400 Three Springs Drive - QA Weirton, WV 26062	Paul Sobutka	(304) 797-2658	00052 M	November 10-11, 1997	Dropping Certification for 2000		

***CONFIRMED**

Laboratory	Director	Telephone	Certification Number	Last On-Site Evaluation	Next On-Site Evaluation	Last W.S.M. Study	Pass/Fail
West Virginia Department of Health Office of Laboratory Services Environmental Microbiology Section 167 - 11th Avenue South Charleston, WV 25302	Andrea Labik, Sc.D.	(304) 558-3530	00003 M	November 30- December 1, 1999		Gp. I (2/25/02) Gp. III (1/15/02) Gp. IV (1/17/02)	Pass Pass Pass
West Virginia Department of Health Region 9 District Health Office 44 Wiltshire Rd. Kearneysville, WV 25430	Elizabeth Karickhoff	(304) 725-5832	00005 M	September 28-29, 1999	9/02	Gp. I (4/20/01) Gp. III (4/20/01) Gp. IV (6/01)	Pass Pass Pass
Wheeling Water Treatment Plant 1305 Richland Avenue Wheeling, WV 26003	Philip Kowalski	(304) 234-3835	00351 CM	November 8-9, 2000	11/02	Gp. III (4/9/02) Gp. IV (11/5/01)	Pass Pass
WVAWC - Huntington 24th Street and Ohio River Road Huntington, WV 25710	Dave Peters	(304) 525-8193	00061 M	March 23-24, 2000	3/03	Gp. I (4/20/01) Gp. IV (4/20/01)	Pass Pass
WVAWC - Kanawha Valley Court and Dryden Streets Charleston, WV 25301	Teri Merrifield	(304) 340-2037	00201 CM	September 8-9, 1999	9/02	MF (5/21/01) HPC (1/28/00)	Pass Pass
WVAWC - Montgomery 148 - 6th Avenue Montgomery, WV 25136	Teri Merrifield	(304) 442-9728	00101 M	February 10-11, 1997	Dropping Certification for 2000		
WVAWC - New River Plant 300 Bachman Road Beckwith, WV 25840	Marshall Murray	(304) 465-0682	00102 M	June 6, 2001	6/03	Gp. I (5/6/02)	Pass
WVAWC - Oak Hill 225 Jones Avenue Oak Hill, WV 25901	Marshall Murray	(304) 465-0682	00102 M	December 11-12, 1997	Closed - Moved To New River Plant in 2001	Gp. I (12/20/00)	Pass
WVAWC - Bluestone 227 Edwards Road True, WV 25988	Dave Thomas	(304) 466-5050	00446 M	June 21, 2001	6/03	Gp. I (5/8/02)	Pass
WVAWC - Bluefield RR 2, Box 425 A Bluefield, WV 24701	Dave Thomas	(304) 327-8913	00282 M	May 31, 2001	5/03	Gp. I (5/3/02)	Pass
WVAWC - Weston R.R. 2, Box 192 Weston, WV 26452	Billie Suder	(304) 269-1804	00211 M	October 12-13, 2000	10/02	Gp. I (5/7/02)	Pass

***CONFIRMED**

Tom Ong
<tomong@wvdhhr.org
>

05/31/02 03:21 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA
cc: Andrea Labik <andrealabik@wvdhhr.org>, Charlotte Billingsley <charlottebillingsley@wvdhhr.org>
Subject: Re: Yearly Questionnaire

Joe, here is the Micro portion for WV for the yearly questionnaire. They are attached as Word Perfect Documents. Sorry for getting it to you at the last minute.

Tom

>>> <Slayton.Joe@epamail.epa.gov> 04/29/02 06:50PM >>>
In lieu of a formal annual State Lab Certification Program report, OGWDW (EPA Cinc.) is ok with completion of the attached questionnaire. Please let me know if you have trouble opening/reading it or have questions. I would like to have this in my files by the end of May as I have will be audited by the Cinc. folks. Please provide these as electronic files.
Thanks, JoeS

(See attached file: R3 2002 SDWA Lab Certification Program Questionnaire.wpd)


R3 2002 SDWA Lab Certification Program Questionnai WV On-Site,WSM Schedule Rev 5-31-02.w

Regional SDWA Laboratory Certification
Review Questionnaire for West Virginia
(Chemistry Portion of Program)

Completed by: Wayne Morganroth Title: Laboratory Supervisor/Certification Officer

Date: May 23, 2002 Phone: 1(304)-558-0197 FAX: 1-(304)-558-4143

E-Mail: waynemorganroth@wvdhhr.org

Organization/Address: WV DHHR, Bur. of Public Health
Office of Lab Services, Environmental Chemistry Section
4710 Chimney Drive, Suite G, Charleston, WV 25302

1. Provide a listing of all Microbiology laboratories your State certifies and the date of the last on-site inspection and the projected date for the next on-site inspection.

Not applicable to chemistry portion of program.

2. Provide a listing of all Chemistry laboratories your State certifies and the date of the last on-site inspection and the projected date for the Next on-site inspection.

In-State Laboratories

Name of Laboratory	Date of Last On-site	Projected Date Next On-site
A. C. & S., Inc.	Record/PT Audits June '00	June 2002
Analabs, Inc.	July 19, 2001	July 2004
Clarksburg Water Board	July 31, 2001	July 2004
C. T. & E.. Env. Svcs., Inc.	August 1997	4th Week, July 2002
REI Consultants, Inc.	October 1997	2nd Week, August 2002
Reliance Labs, Inc.	October 1997	2nd Week, July 2002
Special Analytical Services	August 8, 2001	August 2003
Sturm Environmental Svcs.	September 20, 2001	September 2003
WV Am. Water, Charleston	June 28, 2001	June 2003
Wheeling Water Treatment	September 26, 2001	September 2004

We do not perform on-site examinations of the following out-of-state laboratories. These

are certified on the basis of home state certification and a complete examination of all requested information.

Name of Laboratory	City & State Location
American Water Works Service Co., Inc.	Belleville, Illinois
Aqua Tech Environmental Laboratories	Melmore, Ohio
Aqua Tech Environmental Laboratories	Marion, Ohio
Environmental Engineering & Technology	Newport News, Virginia
Environmental Health Labs	South Bend, Indiana
Lancaster Laboratories	Lancaster, Pennsylvania
MWH Laboratories	Pasadena, California
National Testing Laboratory, Ltd.	Ypsilanti, Michigan
Severn Trent Laboratories	West Sacramento, California
TestAmerica, Inc.	Orlando, Florida
Triangle Labs, Inc.	Durham, North Carolina
US Army Center for Health Promotion and Preventive Medicine	Aberdeen Proving Ground, Maryland

3. Provide a listing of all Rad Chemistry laboratories your State certifies and the date of the last on-site inspection and the projected date for the next on-site inspection.

Not applicable. Rad labs are certified by the radiological section of the WV Office of Environmental Health Services.

4. Does your State have the resources to carry out the certification program properly (on-sites, PT tracking, certification tracking, issuance of certifications)? What are the major bottlenecks/problems/shortfalls?

No - we do not have adequate resources. We lack personnel to do the work - we need more certification officers; at present we have two - one certified to perform inorganic and organic on-site inspections and one certified for inorganic inspections only. The two we have a host of other duties. Because of this it is very difficult to schedule on-sites and be able to fulfill them as scheduled. This is complicated by the fact that the lab to be inspected must be notified in writing at least a month in advance. In addition we have scheduled on-sites on several occasions and then have not been able to secure a state car for travel to the laboratory (our parent laboratory has one state car assigned for all approved travel by employees of the laboratory).

5. EPA requires laboratories to pass a PT for each contaminant by each method, each year

for which they are seeking certification. Who in your State keeps the PT data for the private laboratories? Wayne Morganroth

Are they checking to be sure the private laboratories pass a PT for contaminants by each method each year for which they are seeking certification. Yes.

How does your State track the PT performance of laboratories. Through addition of PT data on a certification tracking sheet. Is their an electronic database? The tracking sheets are on disk and a hard copy is printed and filed in the laboratory's "active" file which contains the last two years of paper that bears directly on current certification status.

6. Do you have any comments, good or bad, about the new privatized PT program? I would like to see more consistency in the order in which the various PT providers submit PT results. I think it would also make it easier if there were a consistent manner in categorizing the various analytes - particularly with regard to organics - designations such as SOCs, herbicides, and pesticides seem to be used somewhat interchangeably.

Are the providers including all the necessary information on their reports to you? Yes, but sometimes it takes more time than it should to locate it.

7. Where does your State get their PT samples? From Environmental Resource Associates. Is the State satisfied with them? Quite satisfied.

8. What schedule does your State follow for PTs, e.g., specified time of year for studies and make-up studies? Beginning January 1, 2003 we are adopting the same schedule that EPA has set up.

9. List your State's SDWA Certification Officers and their education and related experience.

Larry Duffield, B. S. in Biology. Approximately 15 years experience in the SDWA analyses of metals. Has also several years experience in helping with on-site inspections prior to becoming certified as a CO in the area of inorganic analyses in the summer of 2000.

Wayne Morganroth, Ph. D. in Physical Chemistry. Became certified as a CO for inorganic analyses in the summer of 1994 and have worked in the certification effort since then. Attended the EPA Certification Course in Cincinnati, OH in the summer of 1999 at which time I became a CO in the area of organic analyses.

10. List training provided to SDWA Certification Officers in the last year. None. We attempted to get Larry Duffield enrolled in the certification course in Cincinnati, OH last year, but we were unsuccessful since the class filled rather early.

11. List training provided by State to SDWA certification community in the last year?

None was provided; this is beyond our present capabilities - see answer to question 4.

12. Provide an organizational structure of the State's Certification Program and indicate to what program element/s it reports.

	Reports To:	Reports to:
Larry Duffield	**Wayne Morganroth** **Env. Chem. Lab. Sup.**	**Dr. Andrea Labik** **O. L. S. Director**

13. Provide a description of the certification procedures including downgrading criteria and process. Please indicate if you have written quality Manuals/SOPs for your lab certification program and provide their titles.

A description of our certification procedures, including down-grading criteria) is given in Section I, entitled Criteria for Certifying Laboratories -- (General Directions) of our laboratory certification program SOP. The title of this SOP is West Virginia Department of Health and Human Resources, Office of Laboratory Services, Environmental Chemistry - Standard Operating Procedures, EPA/SDWA Laboratory Certification. In essence our laboratory certification procedures are those stipulated in the 4th Edition of EPA's Manual for the Certification of Laboratories Analyzing Drinking Water, or those in a current edition when certification procedures are performed.

14. List and certification downgrading actions in the last year with reasons for those actions.

One small laboratory (a satellite lab of a parent laboratory) was decertified from performing drinking water chemical analyses under the SDWA. This was done for the following reasons: 1. The occurrence of several serious deficiencies and 2. The failure to submit PT data for the last year and a half. They were only performing analyses for two analytes - once they were decertified for the performance of these two there were no remaining analytes that we certify for. Although they are decertified for the performance of chemical parameters they still have retained certification for microbiological analyses.

15. List topics you would like on the next Region 3 SDWA CO's Meeting Agenda or for the national LabCert bulletin.

A more complete elucidation of the proficiency testing scheduling and its implementation..

Correspondence

Subj: **E-Mail to Andrea Labil--WV Lab Certificaiton, 11-21-00 and QA Manual**
Date: 1/3/2001 8:47:32 PM Eastern Standard Time
From: Ex. 6 - Personal Privacy
To: Andrealabik@wvdhhr.org
CC: Rogers.rick@epa.gov, Jones.charlie@epa.gov
CC: Slayton.joe@epa.gov

01/03/01:

To avoid problems with translation between wordprocessor software, I have included all my comments directly in this message. Forgive the AOL address but I performed this review and response at home.

1. First and foremost thanks for the great Christmas gift, i.e., the Manual of Quality Assurance 2000. Great job Dr. Morganroth et al! I will share a copy with the EPA Inorganic Chemistry Assessors.

2. Also a big welcome back to Charlotte Billingsley!

3. Dr. Morganroth:

a. Please notify your PT provider to forward all PT results to the U.S. EPA, Water Protection Division, Mr. Robert Lange, 3WP32, 1650 Arch Street, Philadelphia, PA 19103-2029. His phone number is 215-814-5459. The providers send the results directly to the "authority". If the PT provider allows two persons, the second would be the Regional QA Officer, Charles Jones Jr., 3ES10. When you get a copy of the results (you mentioned late January 2001), I would appreciate your sending me a copy to further close out the last assessment.

b. Given that the laboratory has had problems with the fluoride PTs via the Ion Chromatography method, I assume you have been analyzing compliance samples for Fluoride via the ion selective electrode. Is this correct? Could you forward the most recent fluoride ISE method detection limit and IDC results (not the raw data, just the final compilations)?

c. Dr. Labik indicated that there was renewed efforts to get the Big Chimney Laboratory E-Mail access. Any progress? I will sent this message directly to Dr. Labik just in case.

d. With regard to WV's SDWA Chemistry Lab Certification Program:

1) What is your status?

2) Is the program back on track with the schedule of on-site assessments?

3) Are laboratories staying on track/schedule with their PT participation and are the PT providers forwarding you the reports?

4) Are any additional SOPs/Manuals etc. describing the program available?

5) Did any of your assessors make to the EPA SDWA course in Cincinnati?

e. Comments on the Manual of Quality Assurance:

1) Nice Job!

2) It is suggested that two additional columns be added to the table in Appendix M (Precision and Accuracy Samples), namely: "Quality Control Acceptance Limits" (either list fixed limits or indicate how they are routinely updated and reference the supporting compilations); and a column listing the "Corrective Actions" (specific steps to be taken when the QC check exceeds the acceptance limits).

Joe Slayton

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Joe Slayton

Sharon Cibrik <sharoncibrik@wvdhhr.org>

04/05/01 01:12 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:

Subject: WV Answers to Questionnaire

Attached are WV's answers to the questionnaire. Let me know if you need additional information.

Charlotte Billingsley

SDWA UPDATE APRIL 2 - 2(

WV

Questionnaire

STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Bob Wise
Governor

Paul L. Nusbaum
Secretary

FACSIMILE TRANSMITTAL SHEET

OFFICE OF LABORATORY SERVICES
167 Eleventh Avenue
South Charleston, West Virginia 25303-1114

FAX NUMBER (304) 558-2006
TELEPHONE NUMER (304) 558-3530

DATE: 4/5/01 **NUMBER OF PAGES** 8 **(Including Cover)**

ROUTINE: _____ **PRIORITY** X

TO:

NAME: Joe Slayton

COMPANY: Region III EPA Laboratory

FAX NO: 410 305-3095

FROM:

NAME: Charlotte Billingsley

SUBJECT:

Lab Certification Questionnaire from WV
QA Manual additions that you requested.

COMMENTS: Please send Ms. Lobik an email to let us know if you rec'd this ok.

I should have e-mail soon. The Big Chemistry chemistry lab is being put on-line — finally!! I am actually enjoying being back at the lab — part-time is great.

WEST VIRGINIA UPDATE

SDWA LABORATORY CERTIFICATION PROGRAM
APRIL 2, 2001

Regional Review Questions 2000 - *See original from Joe Slayton on 3/19/01.

Rev. Question #1 - West Virginia was surveyed on 12/1/99. Next Survey should be in 2002.

Rev. Question #2 - West Virginia will not seek NELAC accreditation within the next year.

Rev. Question #3 - If West Virginia ever seeks NELAC accreditation, WV will likely run a two-tiered program. WV must make a legislative change to accept NELAC accreditation.

Rev. Question #4 - Not applicable

Rev. Question #5 - Not applicable

Rev. Question #6 - Yes, for microbiology; No, for chemistry. For chemistry, WV has one person certified to perform on-sites for inorganic and organic chemistry and another person certified for inorganics. Each surveyor spends approximately ten percent of his time on the certification for chemistry. This time is not adequate and changes are being made to give these persons more available time. An office assistant is to be hired within the next two-three months. This person will do routine clerical tasks that are currently performed by the analytical staff. WV also has plans to send another chemist to certification officer training. West Virginia is weakest in the area of organic chemistry and no longer performs organic testing in its laboratory.

Rev. Question #7 - West Virginia certifies by analyte and by method. (Copies of certification letters will be faxed.)

Rev. Question #8 - WV sent one chemist to the EPA Certification Course last year for certification in inorganic chemistry and plans to send that same person to the organic training this year unless funds are not available.

Rev. Question #9 - WV certifies for HAA5.

Rev. Question #10 - WV does not have an in-state laboratory that wants certification for RAD's.

Rev. Question #11 - WV plans to send Larry Duffield (Chemistry) and Tom Ong (Microbiology) to the CO's meeting at Fort Meade in August.

Rev. Question #12 - Some reports in chemistry are easier to read than others; for microbiology, WV would like to see the date of analysis on the PT results sheet.

Rev. Question #13 - WV permits the labs to select any of the approved providers. Laboratories are using a variety of suppliers for microbiology and chemistry. WV labs are using ERA, Absolute Standards, APG for chemistry and ERA, MicroChek and Chrisope for microbiology.

SUMMARY

Certification	No. In-State	No. Out-of-State
Chemistry	10	14
Microbiology	23 (Including OLS)	4

Number Labs Due for On-site 2001 - 2002

Chemistry	10
Microbiology	9

WV Survey Officers

Microbiology	Chemistry
Tom Ong	Wayne Morganroth
Joyce Vance-Abshire	Larry Duffield

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WV OFFICE OF LABORATORY SERVICES
ENVIRONMENTAL CHEMISTRY
QUALITY ASSURANCE MANUAL

- 2000 -

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QUALITY CONTROL AND ACCEPTANCE LIMITS

ANALYTES

Analyte	Quality Control & Acceptance Limits	Corrective Action
Alkalinity	Duplicates ± 5% Relative Percent Difference Quality Control Sample 100 ± 10% Recovery	Repeat Analysis of specimen New Quality Control Sample New Reagents
Calcium Hardness	Duplicates ± 5% Relative Percent Difference Quality Control Sample 100 ± 10% Recovery	Repeat Analysis of specimen New Quality Control Sample New Reagents
Total Hardness	Duplicates ± 5% Relative Percent Difference Quality Control Sample 100 ± 10% Recovery	Repeat Analysis of specimen New Quality Control Sample New Reagents
Chloride	Laboratory Fortified Blank 100± 10% Recovery => Standard Deviation (30 Data points) Laboratory Fortified Sample Matrix 100±10% Recovery => Standard Deviation (30 Data points) Duplicates ± 5% Relative Percent Difference -> Standard Deviation (30 Data points) Quality Control Samples 100± 10% Recovery => Standard Deviation (30 Data points)	Repeat Analysis of specimen New Quality Control Sample New Eluent (Stock and working) New Calibration Standards Refer to DX-120 IC Operator's Manual Replace Column
Sulfate	Laboratory Fortified Blank 100± 10% Recovery -> Standard Deviation (30 Data points) Laboratory Fortified Sample Matrix 100± 10% Recovery -> Standard Deviation (30 Data points) Duplicates ± 5% Relative Percent Difference => Standard Deviation (30 Data points) Quality Control Samples 100± 10% Recovery -> Standard Deviation (30 Data points)	Repeat Analysis of specimen New Quality Control Sample New Eluent (Stock and working) New Calibration Standards Refer to DX-120 IC Operator's Manual Replace Column
Fluoride	Laboratory Fortified Blank 100± 10% Recovery -> Standard Deviation (30 Data points) Laboratory Fortified Sample Matrix 100± 10% Recovery -> Standard Deviation (30 Data points) Duplicates ± 5% Relative Percent Difference => Standard Deviation (30 Data points) Quality Control Samples 100± 10% Recovery -> Standard Deviation (30 Data points)	Stock eluent add to remove water dip Repeat Analysis of specimen New Quality Control Sample New Eluent (Stock and working) New Calibration Standards Refer to DX-120 IC Operator's Manual Replace Column
Nitrate	Laboratory Fortified Blank 100± 10% Recovery -> Standard Deviation (30 Data points) Laboratory Fortified Sample Matrix 100± 10% Recovery -> Standard Deviation (30 Data points) Duplicates ± 5% Relative Percent Difference => Standard Deviation (30 Data points) Quality Control Samples 100± 10% Recovery => Standard Deviation (30 Data points) Column Efficiency 100± 4%	25 µL Sodium Thiosulfate added to remove excess chlorine Repeat Analysis of specimen New Quality Control Sample New Calibration Standards New Copper-Cadmium Column Refer to Standard Operating Procedure
Nitrite	Laboratory Fortified Blank 100± 10% Recovery -> Standard Deviation (30 Data points) Laboratory Fortified Sample Matrix 100± 10% Recovery -> Standard Deviation (30 Data points) Duplicates ± 5% Relative Percent Difference => Standard Deviation (30 Data points) Quality Control Samples 100± 10% Recovery => Standard Deviation (30 Data points)	25 µL Sodium Thiosulfate added to remove excess chlorine Repeat Analysis of specimen New Quality Control Sample New Calibration Standards Refer to Standard Operating Procedure
Nitrate + Nitrite	Laboratory Fortified Blank 100± 10% Recovery => Standard Deviation (30 Data points) Laboratory Fortified Sample Matrix 100± 10% Recovery -> Standard Deviation (30 Data points) Duplicates ± 5% Relative Percent Difference -> Standard Deviation (30 Data points) Quality Control Samples 100± 10% Recovery => Standard Deviation (30 Data points)	25 µL Sodium Thiosulfate added to remove excess chlorine Repeat analysis of specimen New Quality Control Sample New Calibration Standards New Copper-Cadmium Column Refer to Standard Operating Procedure
PH	Duplicates ± 5% Relative Percent Difference Quality Control Sample 100 ± 10% Recovery	Repeat Analysis of specimen New Quality Control Sample New Reagents Replace Electrodes
Total Dissolved Solids	Duplicates ± 5% Relative Percent Difference Quality Control Sample 100 ± 10% Recovery	Repeat Analysis of specimen New Quality Control Sample Recalibrate Balance
Turbidity	Duplicates ± 5% Relative Percent Difference Laboratory Fortified Blank 100 ± 10% Recovery Quality Control Sample 100 ± 10% Recovery	Repeat Analysis of specimen New Quality Control Sample New Calibration Standards Replace Cell and Lamp
Conductivity	Duplicates ± 5% Relative Percent Difference Quality Control Sample 100 ± 10% Recovery	Repeat Analysis of specimen New Quality Control Sample New Reagents Replace Electrodes

ENVIRONMENTAL CHEMISTRY
QUALITY CONTROL
Metals

Method	QC	Acceptance Limit	Corrective Action
SM 3111 B	Lab Duplicate (LDP)	<20% RPD	Determine cause, correct, & repeat analysis
	Digested Duplicate (DDP)	<20% RPD	Determine cause, correct, & repeat analysis
	Lab Reagent Blank (LRB)	<MDL	Cease Analysis, determine source of contamination, and resolve problem before continuing analysis.
	Lab Fortified Blank (LFB)	85 - 115%	Cease analysis, determine cause of loss or contamination, resolve problem before continuing analysis.
	Lab Performance Check Solution (QC Standard)	90 - 110%	Cease analysis, recalibrate, & reanalyze all samples back to last acceptable QC Std.
	QC Blank (cal blank)	<IDL, >-IDL	Reanalyze; upon second failure, recalibrate & reanalyze all samples back to last acceptable QC Std/QC Blank pair.
	Quality Control Sample (QCS)	90 - 110%	Cease analysis, determine cause & rectify before continuing.
	Reporting Limit Verification (RLV)	80 - 120%	Reanalyze; upon second failure recalibrate & repeat. If continuing to fail or has high probability of failure, consider raising RLV level.
	Lab Fortified Sample Matrix	85 - 115%	If spike fails and background analyte is <spike conc., repeat analysis by Standard addition. If spike <25% analyte, no calculation or reanalysis necessary
SM 3113 B	Lab Duplicate (LDP)	≤10% RPD	Repeat as necessary until acceptable
	Digested Duplicate (DDP)	<20% RPD	Determine cause, correct, & repeat analysis
	Lab Reagent Blank (LRB)	<MDL	Cease analysis, determine source of contamination and resolve problem before continuing analysis.
	Lab Fortified Blank (LFB)	85 - 115%	same as 3111 B
	Lab Perf. Check Solution (QC std)	90 - 110%	same as 3111 B
	QC Blank (cal blank)	<IDL, >-IDL	same as 3111 B
	Quality Control Sample (QCS)	90 - 110%	same as 3111 B
	Reporting Limit Verification (RLV)	80 - 120%	same as 3111 B
	Lab Fort. Sample Matrix (LFSM)	70 - 130%	If LFSM fails but QC spike recovers within 85 - 115%, sample prep and/or spiking solution or procedure is suspect and should be reviewed & corrected & documented. If LFSM and QC spike both fail, then analysis for that sample should be completed by standard additions.

ENVIRONMENTAL CHEMISTRY
QUALITY CONTROL
Metals

Method	QC	Acceptance Limit	Corrective Action
EPA 200.7	Lab Duplicate (LDP)	<20% RPD	Determine cause, correct, & repeat analysis
	Digested Duplicate (DDP)	<20% RPD	Determine cause, correct, & repeat analysis
	Lab Reagent Blank (LRB)	<MDL	Cease analysis, determine source of contamination and resolve problem before continuing analysis.
	Lab Fortified Blank (LFB)	85 - 115 %	Cease analysis, determine source of contamination or loss of analyte, resolve problem before continuing analysis.
	Instrument Performance Check Solution (IPC)	±5% Initial ±10% subsequent	Reanalyze either or both IPC solution and cal blank. If the second analysis of the IPC solution or the cal blank fail, cease analysis, determine cause, correct and recalibrate. All samples following last acceptable IPC must be reanalyzed.
	Calibration Blank	<IDL, >-IDL	Same as for IPC (above)
	Quality Control Sample (QCS)	$\bar{x}$,±5%	Source of problem must be identified and corrected before continuing analyses
	Reporting Limit Verification	80 - 120%	Reanalyze; upon second failure, recalibrate & repeat. If continues to fail, or has high probability of failure, consider raising RLV level.
	Lab Fortified Sample Matrix (LFSM)	70 - 130%	If performance for analyte is shown to be in control, analysis should be completed by standard additions or use of an internal standard considered.
	Analyte Addition Test (QC Spike)	85 - 115%	Analysis must be completed by standard additions or use appropriate internal standard. If analyte addition <20% of sample analyte Conc., use dilution test.
	Dilution Test	±10%	Analysis must be completed by standard additions or use appropriate internal standard.
EPA 200.9	Lab duplicate (LDP)	<20% RPD	Determine cause, correct, & repeat anlaysis
	Digested Duplicate (DDP)	<20% RPD	Determine cause, correct, & repeat analysis
	Lab Reagent Blank (LRB)	<MDL	Cease analysis, determine source of contamination and resolve problem before continuing analysis.
	Lab Fortified Blank (LFB)	85 - 115%	Cease analysis, determine source of contamination or loss of analyte and resolve problem before continuing analysis.
	Instrument Performance Check Solution (IPC)	±5% Initial ±10% Subsequent	Same as for 200.7
	Calibration Blank	<IDL,>-IDL	Same as for 200.7

ENVIRONMENTAL CHEMISTRY
QUALITY CONTROL
Metals

Method	QC	Acceptance Limit	Corrective Action
	Quality Control Sample (QCS)	±10%	Same as for 200.7
	Reporting Limit Verification (RLV)	80 - 120%	Same as for 200.7
	Lab Fortified Sample Matrix (LFSM)	70 - 130%	Completion of analyte addition test and/or standard additions may be called for. Refer to para. 9.4.4 - 9.48 of EPA 200.9 for extensive, complex options.
	Analyte Addition Test (QC Spike)	85 - 115%	Complete analysis by standard additions
EPA 245.1	Laboratory Duplicate (LDP)	<20% RPD	Same as 200.7
	Lab Reagent Blank (LRB)	<MDL	When LRB values are 10% or more of the analyte in sample or is 2.2x analyte MDL whichever is greater, fresh aliquots of the samples must be prepared & analyzed again after source of contamination has been corrected and acceptable LRB values obtained.
	Lab Fortified Blank (LFB)	85-115%	Cease analysis, identify problem and resolve before continuing analysis.
	Instrument Performance Check Solution (IPC)	±5% Initial ±10% Subsequent	Same as 200.7
	Calibration Blank	<MDL	Same as 200.7
	Quality Control Sample (QCS)	±10%	Same as 200.7
	Reporting Limit Verification (RLV)	80 - 120%	Research and resolve problem. Consider raising RLV if too low.
	Lab Fortified Sample Matrix (LFSM)	70 - 130%	Data user must be informed that the results are suspect due to matrix effects.

QUALITY CONTROL AND ACCEPTANCE LIMITS

Analyte	Quality Control & Acceptance Limits	Corrective Action
Fluoride by ion selective electrode	Quality Control Sample Using CDC Limit 100±5% Rec Laboratory Fortified Blank Using CDC Limit 100±5% Rec	Repeat Analysis of specimen New Quality Control Standard New Calibration Standards Replace contaminated glassware Replace electrodes

Joe Slayton

04/10/01 08:21 PM

To: Andrealabik@wvdhhr.org

cc:

cc:

Subject: E-Mail to Andrea Labil--WV Lab Certificaiton, 11-21-00 and QA Manual

Good Day...just working my way thru old assessments and could not find a response to this part of my 1/3/01 message...If you/your folks have already responded please forgive me:

With regard to WV's SDWA Chemistry Lab Certification Program:

1) What is your status?

2) Is the program back on track with the schedule of on-site assessments?

3) Are laboratories staying on track/schedule with their PT participation and are the PT providers forwarding you the reports?

4) Are any additional SOPs/Manuals etc. describing the program available?

5) Did any of your assessors make to the EPA SDWA course in Cincinnati?

Orginial Message.....

----- Forwarded by Joe Slayton/ESC/R3/USEPA/US on 04/10/01 08:21 PM -----

Ex. 6 - Personal Privacy

01/03/01 08:47 PM

To: Andrealabik@wvdhhr.org

cc: Rick Rogers/R3/USEPA/US@EPA, Charlie Jones/R3/USEPA/US@EPA, Joe Slayton/ESC/R3/USEPA/US@EPA

Subject: E-Mail to Andrea Labil--WV Lab Certificaiton, 11-21-00 and QA Manual

01/03/01:

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1. First and foremost thanks for the great Christmas gift, i.e., the Manual of Quality Assurance 2000. Great job Dr. Morganroth et al! I will share a copy with the EPA Inorganic Chemistry Assessors.

2. Also a big welcome back to Charlotte Billingsley!

3. Dr. Morganroth:

a. Please notify your PT provider to forward all PT results to the U.S. EPA, Water Protection Division, Mr. Robert Lange, 3WP32, 1650 Arch Street, Philadelphia, PA 19103-2029. His phone number is 215-814-5459. The providers send the results directly to the "authority". If the PT provider allows two persons, the second would be the Regional QA Officer, Charles Jones Jr., 3ES10. When you get a copy of the results (you mentioned late January 2001), I would appreciate your sending me a copy to further close out the last assessment.

b. Given that the laboratory has had problems with the fluoride PTs via the Ion Chromatography method, I assume you have been analyzing compliance samples for Fluoride via the ion selective electrode. Is this correct? Could you forward the most recent fluoride ISE method detection limit and IDC results (not the raw data, just the final compilations)?

c. Dr. Labik indicated that there was renewed efforts to get the Big Chimney Laboratory E-Mail access. Any progress? I will sent this message directly to Dr. Labik just in case.

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e. Comments on the Manual of Quality Assurance:

1) Nice Job!

2) It is suggested that two additional columns be added to the table in Appendix M (Precision and Accuracy Samples), namely: "Quality Control Acceptance Limits" (either list fixed limits or indicate how they are routinely updated and reference the supporting compilations); and a column listing the "Corrective Actions" (specific steps to be taken when the QC check exceeds the acceptance limits).

Joe Slayton

Andrea Labik
<andrealabik@wvdhhr.org>

04/11/01 05:21 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:

Subject: Re: E-Mail to Andrea Labil--WV Lab Certificaiton, 11-21-00 and QA Manual

Hi Joe
Charlotte assured me that Wayne would be faxing you that information either this afternoon or tomorrow morning. You may have already received it. Just for your information our computer people ran cables out at the Big Chimney Lab and the telephone line was installed. We are just waiting for them to install the router and then they will have E-mail access. I told Wayne that when they are up and running that I get the first E-mail and you get the second.

>>> <Slayton.Joe@epamail.epa.gov> 04/10 8:24 PM >>>
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Ex. 5 - Deliberative

Orginial Message.....

----- Forwarded by Joe Slayton/ESC/R3/USEPA/US on 04/10/01 08:21 PM -----

LABJOECOOL@aol.com

01/03/01
08:47 PM

To: Andrealabik@wvdhhr.org
cc: Rick Rogers/R3/USEPA/US@EPA, Charlie Jones/R3/USEPA/US@EPA, Joe Slayton/ESC/R3/USEPA/US@EPA
Subject: E-Mail to Andrea Labil--WV Lab Certificaiton, 11-21-00 and QA Manual

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Joe Slayton

Joe Slayton

04/19/01 08:16 AM

To: Andrea Labik <andrealabik@wvdhhr.org>

cc: Don Burns/ESC/R3/USEPA/US@EPA

Subject: Re: E-Mail to Andrea Labil--WV Lab Certification, 11-21-00 and QA Manual

Hello: I received a zip disk in the mail and my partner Don Burns has been busy with other things and we have not yet downloaded the disk. I appears to be a quality manual. I did not receive a fax. The questions below concern WV's SDWA Lab Certification Program. Do you know if Wayne also addressed the questions listed below in his zipped files?
Andrea Labik <andrealabik@wvdhhr.org>

Andrea Labik <andrealabik@wvdhhr.org>

04/11/01 05:21 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:

Subject: Re: E-Mail to Andrea Labil--WV Lab Certificaiton, 11-21-00 and QA Manual

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5) Did any of your assessors make to the EPA SDWA course in Cincinnati?

Orginial Message.....

----- Forwarded by Joe Slayton/ESC/R3/USEPA/US on 04/10/01 08:21 PM -----

Ex. 6 - Personal Privacy

01/03/01
08:47 PM

To: Andrealabik@wvdhhr.org
cc: Rick Rogers/R3/USEPA/US@EPA, Charlie Jones/R3/USEPA/US@EPA, Joe Slayton/ESC/R3/USEPA/US@EPA
Subject: E-Mail to Andrea

Labi1--WV

Lab Certificaiton, 11-21-00 and QA Manual

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1) What is your status?

2) Is the program back on track with the schedule of on-site

Tom Ong
<tomong@wvdhhr.org
>

04/27/01 12:40 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:

Subject: WV Micro Chart

The chart should be self explanatory.

Gp I = Membrane Filtration
Gp II = Heterotrophic Plate Count (No PE's Required)
Gp III = Multi Tube Fermentation
Gp IV = Chromogenic/Fluorogenic Substrate Test

One other thought about the privatization of PE's. Some providers do not provide the date of analysis - only the Study Report Date. I think the Date of Analysis is also important.

WV On-Site WSM Schedule Rev 4

Save all WV
stuff

Gregory Young
<gregoryyoung@wvdhhr.org>
04/30/01 03:52 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:

Subject: E-mail Address WV DHHR OLS

Hi Joe.

This is Greg Young from the West Virginia Dept. Of Health and Human Res. Laboratory. I think I may have found the correct way to send E-mail outside our Intranet.

Our E-Mail Address are:

Dr. Wayne Morganroth	WaynMorganroth@wvdhhr.org
Larry Duffield	LarryDuffield@wvdhhr.org
Greg Young	GregoryYoung@wvdhhr.org

P.S. Wayne needs to call the computer service and correct a problem with his account. His E-mail address should not change.

Joe Slayton
05/01/01 10:00 AM

To: Gregory Young <gregoryyoung@wvdhhr.org>
cc: waynmorganroth@wvdhhr.org
cc: Joe Slayton/ESC/R3/USEPA/US@EPA
Subject: Re: E-mail Address WV DHHR OLS

Greg/Wayne Cool...this is great. I have about finished typing up the detailed checklist for WV's Lab Certification Program...since we have not been back since Dec. 1999. Wayne or Greg if Wayne is still not on-line, please email me the list of ten labs, date of last on-site, scheduled date for next on-site and the lab's overall PT certification status (e.g., satisfactory for organics but failed and working on F, etc). If he only has it as hard copy please fax it to 410-3095-3095 thanks. I will add it to the questionnaire and sent it to WayneM and TomO. Thanks, JoeS

Gregory Young <gregoryyoung@wvdhhr.org>

Gregory Young <gregoryyoung@wvdhhr.org>
04/30/01 03:52 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA
cc:
Subject: E-mail Address WV DHHR OLS

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Larry Duffield LarryDuffield@wvdhhr.org
Greg Young GregoryYoung@wvdhhr.org

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Joe Slayton
05/01/01 10:05 AM

To: Gregory Young <gregoryyoung@wvdhhr.org>
cc: waynmorganroth@wvdhhr.org
Subject: Re: E-mail Address WV DHHR OLS

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cc:
Subject: E-mail Address WV DHHR OLS

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Our E-Mail Address are:
Dr. Wayne Morganroth WaynMorganroth@wvdhhr.org
Larry Duffield LarryDuffield@wvdhhr.org
Greg Young GregoryYoung@wvdhhr.org

P.S. Wayne needs to call the computer service and correct a problem with his account. His E-mail address should not change.

Joe Slayton

05/05/01 11:55 AM

To: WaynMorganroth@wvdhhr.org, Sharon Cibrik@wvdhhr.org, AndreaLabik@wvdhhr.org, Waynemorganroth@wvdhhr.org

cc: Rick Rogers/R3/USEPA/US@EPA, Jason Gambatese/R3/USEPA/US@EPA, Charlie Jones/R3/USEPA/US@EPA, R3 ESC-LQC

Subject: WV Lab Cert Program On-site Assessment Projections

Dr. Morganroth (Wayne): Thanks for the table of projected inspections and status of the labs with regard to PT performance. I am concern that laboratory on-site assessments (Chemistry) continue to fall further behind (4-5 years between on-sites and the required schedule is every 3 years). From the table you forwarded, no on-site inspections had been performed since the last on-site EPA performed of the program in 12/99 when this problem was identified as potentially problematic. I understand from our conversation that the Laboratory Management is aware of the problem and the Agency applauds the positive steps to improve the situation, e.g, hiring a clerical assistant and have additional CO trained in Organic Chemistry. However, since table indicates that the projected dates are tentative (warning of the COs having multiple commitment's), to help assure this effort continues to be given priority, it is requested that WV Laboratory management provide a status update on progress of these assessments each month through the summer (May, June, July, August- when these assessments are tentatively scheduled). It is requested that this be an electronic message including a re-submission of the "status table" (already provided) each month, updated with the date of the inspections and any updates with regard to PTs. This should take just minutes and will provide an efficient means by which EPA can document progress in this area. Thanks in advance for your assistance in this matter. Joe Slayton

(Sharon please forward this to Charlotte Billingsley, as I do not have her E-Mail address).

also mailed to Dr. Labik 5/21/01

LRO Copy Room

Joe Slayton

08/17/01 03:36 PM

To: Wayne Morganroth <waynemorganroth@wvdhhr.org>
cc:
Subject: Re: Certification status up-date for August 2001

got it too
Wayne Morganroth <waynemorganroth@wvdhhr.org>

Wayne Morganroth <waynemorganroth@wvdhhr.org>

08/16/01 04:18 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA
cc: Andrea Labik <andrealabik@wvdhhr.org>
Subject: Certification status up-date for August 2001

Joe,

I goofed - forgot to include the update table as an attachment. So am sending it along now. Wayne

August 2001 Certification Up-date Stat

Joe Slayton
09/05/01 09:31 AM

To: Jason Gambatese/R3/USEPA/US

cc:
cc: Joe Slayton/ESC/R3/USEPA/US@EPA

Subject: Re: WV Lab Cert Program On-site Assessment Projections

Jason Gambatese

Jason Gambatese
09/04/01 10:28 AM

To: Joe Slayton/ESC/R3/USEPA/US@EPA

cc:
Subject: Re: WV Lab Cert Program On-site Assessment Projections

Joe- I haven't heard anything since this message. Has the state lab picked up their pace on inspections? Have they hired the new assistance and has it improved their performance?

Jason

Joe Slayton

Joe Slayton
05/05/2001 11:55 AM

To: WaynMorganroth@wvdhhr.org, Sharon Cibrik@wvdhhr.org, AndreaLabik@wvdhhr.org, Waynemorganroth@wvdhhr.org

cc: Rick Rogers/R3/USEPA/US@EPA, Jason Gambatese/R3/USEPA/US@EPA, Charlie Jones/R3/USEPA/US@EPA, R3 ESC-LQC

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Joe Slayton

02/20/02 03:05 PM

To: AndreaLabrik@wvdhhr.org
cc: Jason Gambatese/R3/USEPA/US
cc:
Subject: WV Lab Certification Program

Just spent a day at the DE program office who has been falling behind with their SDWA Lab Certification Program. This painful day reminded me of the WV Chemistry Lab Cert. program. I was wondering if you could check on the status for Chemistry lab certifications. Well I would like more than a simple status report--I would like a quick and simple internal management review.

To get to the heart of the matter I will contrast the WV Chemistry with the WV MicrobiologyLab Cert Program. Microbiology has long had a detailed summary of the program (quality manual/SOPs) and keeps good records on which labs have been inspected and a schedule for those to be inspected, as well as, logical and orderly lab record files, careful tracking of proficiency testing samples each lab has done and those failed and therefore needs to be repeated, training records of COs etc. etc. In performing such an internal review (should take about an hour) please ask the following question: When will WV's chemistry lab cert program be brought to the level of microbiology lab certifications in WV? Perhaps Tom Ong could be of assistance. Perhaps Ms. Billingsley? It is almost time for the yearly questionnaire from the national center in Cincinnati. We have a real responsibility in assuring labs are certified. If not we are breaking an important public trust . I do not want to fill the responses on WV's Chemistry Lab Cert Program with just additional promises.

Joe Slayton
03/05/02 06:20 PM

To: AndreaLabik@wvdhhr.org
cc:
cc:
Subject: WV Lab Certification Program

----- Forwarded by Joe Slayton/ESC/R3/USEPA/US on 03/05/02 06:20 PM -----

Joe Slayton
02/20/02 04:01 PM

To: AndreaLabrik@wvdhhr.org
cc: Jason Gambatese/R3/USEPA/US@EPA
Subject: WV Lab Certification Program

Just spent a day at the DE program office who has been falling behind with their SDWA Lab Certification Program. This painful day reminded me of the WV Chemistry Lab Cert. program. I was wondering if you could check on the status for Chemistry lab certifications. Well I would like more than a simple status report--I would like a quick and simple internal management review.

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Mailer-Daemon@mail.wvdhhr.org

02/20/02 04:01 PM

To: Joe Slayton/ESC/R3/USEPA/US@EPA
cc:
Subject: Message status - undeliverable

The message that you sent was undeliverable to the following:
AndreaLabrik@wvdhhr.org (user not found)

Possibly truncated original message follows:

----- Message from Slayton.Joe@epamail.epa.gov on Wed, 20 Feb 2002 16:01:09 -0500 -----

To: AndreaLabrik@wvdhhr.org

cc: Gambatese.Jason@epamail.epa.go

Subject WV Lab Certification Program

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Charlotte Billingsley <charlottebillingsley @wvdhhr.org>
03/20/02 10:05 AM

To: Joe Slayton/ESC/R3/USEPA/US@EPA
cc: Andrea Labik <andrealabik@wvdhhr.org>
Subject: Re: WV Lab Certification Program

Joe. Dr. Labik has asked me to respond to you concerning the WV Chemistry Program . Attached is my report to her. Work continues and much progress has been made. Please let us know if you need more information at this time. I am assuming that the Cinn questions will be arriving soon. Thanks for your help.

>>> <Slayton.Joe@epamail.epa.gov> 03/05/02 06:22PM >>>

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admaudit.2.wpc

STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Bob Wise
Governor

Paul L. Nusbaum
Secretary

MEMORANDUM

Date: March 19, 2002

To: Dr. Andrea Labik

From: Charlotte Billingsley

Subject: **Administrative Audit of the Environmental Chemistry Laboratory Certification Program**

Since the initial audit of the Environmental Chemistry Certification Program, the entire program has been re-organized and revised. The following progress has been made:

1. All certified laboratory files have been reviewed, organized, and updated;
2. The records format for tracking laboratory certification is being revised and should be completed in early April, 2002;
3. Certification status of all laboratories has been verified and certificates to all laboratories should be in the mail by March 22, 2002. At my request, Tom Ong is e-mailing to Joe Slayton a copy of the 2002 certified labs;
4. The 2002 certified lab list of out-of-state and in-state laboratories will be posted on the website as soon as possible;
5. West Virginia has eleven (11) in-state certified laboratories.

Thanks for the update
please forward ① "records
format for tracking lab
certif."
(note method/analyte)

BUREAU FOR PUBLIC HEALTH
OFFICE OF LABORATORY SERVICES
167 11th Avenue
South Charleston, West Virginia 25303-1137

② SOP

Phone: (304) 558-3530

FAX: (304) 558-2006

Status of on-site laboratory surveys for in-state (WV) laboratories is as follows:

LIST OF ON-SITE LABORATORY SURVEYS

Name of Laboratory	Date On-Site
WV-Am. Water, Charleston	On-site Performed 6-18 & 6-28-01
Analabs, Inc., Beckley	On-site Performed 7-17 & 7-19, 01
Clarksburg Water Board	On-site Performed 7-31-01
Reliance Labs, Hedgesville	On-site Performed 7-27-01
Special Analytical Services	On-site Performed 8-08-01
Sturm Env. Services, Bridgeport	On-site Performed 9-18 & 9-20, 01
Wheeling Water Treatment	On-site Performed 9-26-01
Reliance Labs, Bridgeport	Proposed 2nd Week April 2002
A.C. & S, Nitro	Proposed 1st Week May 2002
C.T. & E. Charleston	Last Week May 2002
REI Consultants, Beaver	3rd Week June 2002

6. Wayne Morganroth is reviewing a draft of the SOP for laboratory certification. Much work remains to be done but attempts will be made to have it completed as soon as possible.

Please let me know if you need additional information.

ENVIRONMENTAL CERTIFICATION

WATER QUALITY LABORATORIES CERTIFIED FOR MICROBIOLOGICAL AND/OR CHEMICAL EXAMINATION OF DRINKING WATER UNDER THE SDWA 2002

Microbiological Certification Officers

Tom Ong

Joyce Vance-Abshire

(304) 558-3530

Chemistry Certification Officers

Dr. Wayne Morganroth

(304) 558-0197

WEST VIRGINIA WATER QUALITY LABORATORIES

2002 Key to List of Approved Tests

MICROBIOLOGY

Group I
Membrane Filter
(Total and Fecal Coliforms)

Group II
Heterotrophic Plate Count

Group III
Multitube Fermentation
(Total and Fecal Coliform)

Goup IV
Chromogenic/Fluorogenic Substrate
(Total Coliforms and *E. coli*)

TRACE METALS

Group I
Lead
Copper

Group II
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Mercury
Selenium
Thallium

INORGANICS

Group I
Nitrate - N

Group II
Nitrite - N

Group III
Fluoride

Group IV
Asbestos

Group V
Cyanide

ORGANICS, PESTICIDES

Group I
Endrin
Lindane
Methoxychlor
Toxaphene
Chlordane
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene

Group II
Alachlor
Atrazine
Simazine

Group III
Aldicarb
Aldicarb sulfone
Aldicarb sulfoxide
Carbofuran
Oxamyl (Vydate)

Group IV
PCB's (Screen and Confirm)

Group V
Diquat

Group VI
Endothall

Group VII
Glyphosate

HALOACETIC ACIDS

Bromoacetic Acid
Bromochloroacetic Acid
Chloroacetic Acid
Dibromoacetic Acid
Dichloroacetic Acid
Trichloroacetic Acid

ORGANICS, HERBICIDES

2,4-D
2,4,5-TP (Silvex)
Pentachlorophenol
Dinoseb
Dalapon
Picloram

ORGANICS, THM's

Chloroform
Bromodichloromethane
Chlorodibromomethane
Bromoform
Total Trihalomethanes

ORGANICS (VOC's)

Group I
Benzene
Carbon tetrachloride
1,2-Dichloroethane
Trichloroethylene
1,1-Dichloroethylene
1,1,1-Trichloroethane
p-Dichlorobenzene
Vinyl chloride
o-Dichlorobenzene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
Ethylbenzene
Styrene
Tetrachloroethylene
Toluene
Xylenes (Total)
Monochlorobenzene
Dichloromethane
1,2,4-Trichlorobenzene
1,1,2-Trichloroethane
1,2-Dichloropropane

Group II
Ethylene dibromide (EDB)
Dibromochloropropane (DBCP)

ORGANICS (SOC's)

Group I
Benzo(a)pyrene

Group II
Di(2-ethylhexyl)adipate
Di(2-ethylhexyl)phthalate

Group III
2,3,7,8-TCDD (Dioxin)

RADIOLOGICALS

Gross alpha
Gross beta
Radium 226
Radium 228
Tritium
Strontium 89
Strontium 90
Iodine 131
Cesium 134
Cesium 137
Cobalt 60
Uranium
Radon-222

*** Indicates Conditional/Provisional/Interim Certification**

NOTE: Unless specifically noted, a laboratory should be considered certified for the entire group of analytes under each parameter heading.

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
AC&S, Inc. West 19th Street Par Industrial Park Nitro, WV 25143	Priscilla Vassar (304) 755-0536	00203 C	Metals I*, II* (except Thallium) Inorganics II*, III*, V* Pesticides I* (Chlordane and Heptchlor Epoxide only), II*, IV* Herbicides* (except Pentachlorophenol) THM's* VOC I*, II* (Dibromochloropropane only) SOC I*, II*
Analabs, Inc. 196 Dayton Street Crab Orchard, WV 25827	Charles Thompson (304) 255-4821	00442 CM	Microbiology II, IV Metals I, II Inorganics I, II*, III, V*
Beckley Water Company 1006 Pluto Road Shady Springs , WV 25918	Eddie Kidd (304) 763-2691	00411 M	Microbiology IV
Clarksburg Water Board 1001 South Chestnut Street Clarksburg, WV 26301	Richard Welch (304) 624-5467	00171 CM	Microbiology I, II, III, IV Metals I
CT&E Environmental Services, Inc. 1258 Greenbrier Street Charleston, WV 25311	Paul P. Painter (304) 346-0725	00202 C	Metals I, II Inorganics I*, II, III, V Pesticides I, II (Simazine*), III Herbicides THM's VOC I, II SOC I
EnviroLab, Inc 6327 Emerson Avenue Parkersburg, WV 26104	Fred Anderson (304) 422-4760	00542 M	Microbiology I, II, IV
Fairmont Water Plant Filtration Plant - Morris Park Fairmont, WV 26555-1428	Doug Amos (304) 366-1461	00251 M	Microbiology II, IV
Hydrochem Laboratories, Inc. Rt. 18 and First Street Shenandoah Junction, WV 25442	Herbert S. Snyder (304) 725-6174	00191 M	Microbiology IV
Morgantown Utility Board Robert B. Creel Water Treatment Facility 171 S. Don Knotts Bloulavard Morgantown, WV 26505	Greg Shellito (304) 292-4322	00311 M	Microbiology I, II, IV
REI Consultants, Inc. 225 Industrial Park Road Beaver, WV 25813	Claude Scott 1-800-999-0105	00412 CM	Microbiology I, II, IV Metals I, II Inorganics I, V Pesticides I (Lindane*), II, III (Oxamyl*), IV (Endothall*), V, VI, VII Herbicides THM's VOC I, II SOC I HAA

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
Reliance Laboratories, Inc. 3790 Hedgesville Rd., Suite I Hedgesville, WV 25427	William Kirk, Jr. (304) 754-7360	00443 CM	Microbiology IV Inorganics I, II, III, V
Reliance Laboratories, Inc. 10 Benedum Airport Industrial Park Bridgeport, WV 26330	William Kirk, Jr. (304) 842-5285	00354 CM	Microbiology I, II, IV Metals I*, II* Inorganics I*, II*, III* THM's* VOC I*
Special Analytical Services 525 - 33rd Street Parkersburg, WV 26101	Michael E. Tedrick (304) 428-8909	00543 C	THM's VOC I
Sturm Environmental Services Brushy Fork Road Bridgeport, WV 26330	David W. Fisher (304) 623-6549	00172 CM	Microbiology II, IV Metals I (Except Lead), II (Except Antimony, Arsenic, Selenium and Thallium) Inorganics I*, II*, III*, V
TraDet RD 2, Box 227A, Battle Run Road Triadelphia, WV 26059	G. William Kalb (304) 547-9094	00353 M	Microbiology I, II, IV
Water Environmental Testing Corner of Route 14 and Blair Avenue Mineral Wells, WV 26150	James C. Wright (304) 489-1060	00541 M	Microbiology I, IV
Weirton Water Treatment Plant 3031 Birch Drive Weirton, WV 26062	Jeff Pearce (304) 797-8566	00051 M	Microbiology I, II, III
West Virginia Department of Health Office of Laboratory Services Environmental Microbiology Section 167 - 11th Avenue South Charleston, WV 25302	Andrea Labik, Sc.D. (304) 558-3530	00003 M	Microbiology I, II, III, IV
West Virginia Department of Health Region 9 District Health Office 44 Wiltshire Rd. Kearneysville, WV 25430	Elizabeth Karickhoff (304) 725-5832	00005 M	Microbiology I, II, III, IV
West Virginia Department of Health Office of Laboratory Services Environmental Chemistry Section 4710 Chimney Drive, Suite G Charleston, WV 25302	Andrea Labik, Sc.D. (304) 558-0197	00003 C	Metals I, II (Arsenic*) Inorganics I, II, III
Wheeling Water Treatment Plant 1305 Richland Avenue Wheeling, WV 26003	Philip Kowalski (304) 234-3835	00351 CM	Microbiology II, III, IV THM's
WVAWC - Huntington 24th Street and Ohio River Road Huntington, WV 25703	Dave Peters (304) 525-8193	00061 M	Microbiology I, II, IV
WVAWC - Kanawha Valley Court and Dryden Streets Charleston, WV 25301	Teri Merrifield (304) 340-2037	00201 CM	Microbiology I, II Metals I, II (Arsenic Only) Inorganics III THM's HAA

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
WVAWC - New River Plant 300 Bachman Road Beckwith, WV 25840	Marshall Murray (304) 574-4075	00102 M	Microbiology I, II
WVAWC - Bluestone 227 Edwards Road True, WV 25988	David L. Thomas (304) 466-5050	00446 M	Microbiology I, II
WVAWC - Bluefield RR 2, Box 425 A Bluefield, WV 24701	David L. Thomas (304) 327-8913	00282 M	Microbiology I, II
WVAWC Corporate Office 1600 Pennsylvania Ave. Charleston, WV 25302	Tom Holbrook (304) 353-6334		
WVAWC - Weston R.R. 2, Box 192 Weston, WV 26452	Billie Suder (304) 269-4272	00211 M	Microbiology I, II

Tom Ong
<tomong@wvdhhr.org
>

To: Joe Slayton/ESC/R3/USEPA/US@EPA
cc: andrealabik@wvdhhr.org
Subject: WV Certified Water Lab Lists

03/19/02 02:22 PM

Here's the updated WV Certified Water Lab List - Its hot off the press.

The attachments are as follows:

1. Cover
2. Color Key
3. In State Laboratories
4. Out of State Laboratories.

Dr. Labik will be sending more info at a later date.

Tom


Water Quality Lab List Cover.w


Water Quality Lab List Color Key.v


WQL-IS 3-19-02 Prov Ind.wp


WQL-OS 3-19-02 Prov Ind.wp

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
American Water Works Service Co., Inc. d.b.a. Belleville Laboratory 1115 South Illinois Street Belleville, IL 62220-3102	Cheryl Norton (618) 235-3600	9911 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, III, IV V, VI, VII Herbicides THM's VOC I, II SOC I, II HAA
Aqua Tech Environmental Laboratories, Inc. Organic Testing 6878 South State Rt. 100 Melmore, OH 44845	Michael Herdlick (419) 397-2659	9905 C	Pesticides I, II, III, IV, V, VI, VII Herbicides THM's VOC I, II SOC I, II HAA
Aqua Tech Environmental Laboratories, Inc. Inorganic Testing 1776 Marion-Waldo Rd. Marion, OH 43302	Deb Johnson (740) 389-5991	9905 C	Metals I, II Inorganics I, II, III, V
EMATS, Inc. State Route 719, Box 1315 Cedar Bluff, VA 24609	(540) 963-8888	9945 M	Microbiology IV
Environmental Engineering and Technology, Inc. 712 Gum Rock Court Newport News, VA 23606	Alan A. Kersnick (757) 873-1534	9942 C	THM's HAA
Environmental Health Labs 110 South Hill Street South Bend, IN 46617	Earl Hansen, Ph.D. (219) 233-4777	9927 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, III (Carbofuran and Oxamyl Only), IV, V, VI, VII Herbicides THM's VOC I, II SOC I, II
Express Analytical Services, Inc. 375 Floral Avenue Chambersburg, PA 17201	Irving M. Kipnis, Ph.D. (717) 263-3222	9925 M	Microbiology IV
Fredericktowne Labs, Inc, 3039-C Ventrie Court Myersville, MD 21773	Mary L. Miller, Ph.D. (301) 293-3340	9924 M	Microbiology I, II, III
KNL P.O. Box 1833 Tampa, FL 33601	Cheryl Hicks (813) 229-2879		Radiologicals Gross Alpha, Gross Beta, Radium 226, Radium 228, Strontium 89, Strontium 90, Uranium
Lancaster Laboratories A Division of Thermo Analytical 2425 New Holland Pike Lancaster, PA 17601-5994	Timothy S. Oostdyk, Ph.D. (717) 656-2300	9906 C	Metals I, II Inorganics I, II, III Pesticides I, III, IV Herbicides THM's VOC I, II SOC I, II

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
Mid Atlantic Laboratories, Inc. 224 Main St., Suite 1 Port Royal, VA 22535	Sylvia C. Storke (804) 742-5577	9926 M	Microbiology II, IV
MHW Laboratories, A Division of MWH Americas, Inc. 555 East Walnut Street Pasadena, CA 91101	Andrew Eaton, Ph.D. (626) 568-6400	9943 C	Metals I, II Inorganics I, II, III, IV, V Pesticides I, II, III, IV, V, V, VII Herbicides THM's VOC I, II SOC I, II
National Testing Laboratory, Ltd. 556 S. Mansfield Road Ypsilanti, MI 48197	Jim Bahen (734) 483-8333 LAB (216) 449-2525 OFFICE	9903 C	Metals I, II Inorganics I, II, III Pesticides I, II Herbicides (Pentachlorophenol*) THM's VOC I, II
Severn Trent Laboratories 880 Riverside Parkway West Sacramento, CA 95605	Eric Redman (916) 373-5600	9930 C	SOC III
Shenandoah Bacteriological Laboratory 434 Reynolds Road Cross Junction, VA 22625	Greg Jones (540) 888-4500	9941 M	Microbiology IV
TestAmerica, Inc. - Orlando Division 4310 East Anderson Road Orlando, FL 32812	Mark Rusler 1-800-851-2560, Ext. 1209	9944 C	Metals I (Copper*), II (Barium*, Beryllium*, Cadmium* and Chromium*) Inorganics I, II, III, V Pesticides I, II, III, IV, V, VI, VII Herbicides (2,4-D*) THM's VOC I, II SOC I, II HAA
Triangle Labs, Inc. 2445 S. Alston Avenue Durham, NC 27713-4411	Philip W. Albro, Ph.D. (919) 544-5729	9923 C	SOC III
U.S. Army Center for Health Promotion and Preventive Medicine 5158 Blackhawk Road Aberdeen Proving Ground, MD 21010-5403	Col. James S. Little (410) 436-8399	9938 C	Metals I, II Inorganics I, II, III Pesticides I, II, III Herbicides THM's VOC I, II SOC I, II

Joe Slayton

04/01/02 04:53 PM

To: Charlotte Billingsley <charlottebillingsley@wvdhhr.org>
cc: Andrea Labik <andrealabik@wvdhhr.org>
cc: Joe Slayton/ESC/R3/USEPA/US@EPA, Andrea Labik <andrealabik@wvdhhr.org>
Subject: Re: WV Lab Certification Program

Thanks for the update and the good news. Please forward a copy of the "records format for tracking lab certification" and the SOP for chemistry certifications. I was checking out WV's list of approved test...just wanted to remind folks that all SDWA certifications must specify the method and the analyte. Thanks, again...keep it coming, JoeS
Charlotte Billingsley <charlottebillingsley@wvdhhr.org>

Charlotte Billingsley <charlottebillingsley@wvdhhr.org>

03/20/02 10:05 AM

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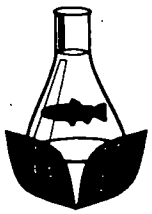
admaudit.2.wpc

Observed WV-Health's

Inspection of Bio-chem Testing, Inc

Dec 2, 1999



BIO-CHEM TESTING, INC.

Putnam Village Shopping Center, Unit #23
P.O. Box 634
Teays, WV 25569
(304) 757-8954

ENVIRONMENTAL LABORATORY

BRIAN NORVELL
Field Supervisor

Craig Lab Certification + ~~Audit~~ Checklist

PRE-SURVEY PACKET FOR ON SITE EVALUATION OF LABORATORIES SEEKING CERTIFICATION UNDER THE SDWA BY THE STATE OF WEST VIRGINIA

LABORATORY Bio-chem Testing Inc.

STREET Putnam Village, Unit 23

CITY Teays **STATE** WV **ZIP CODE** 25569

TELEPHONE/FAX (304) 757-8954, (304) 757-9676

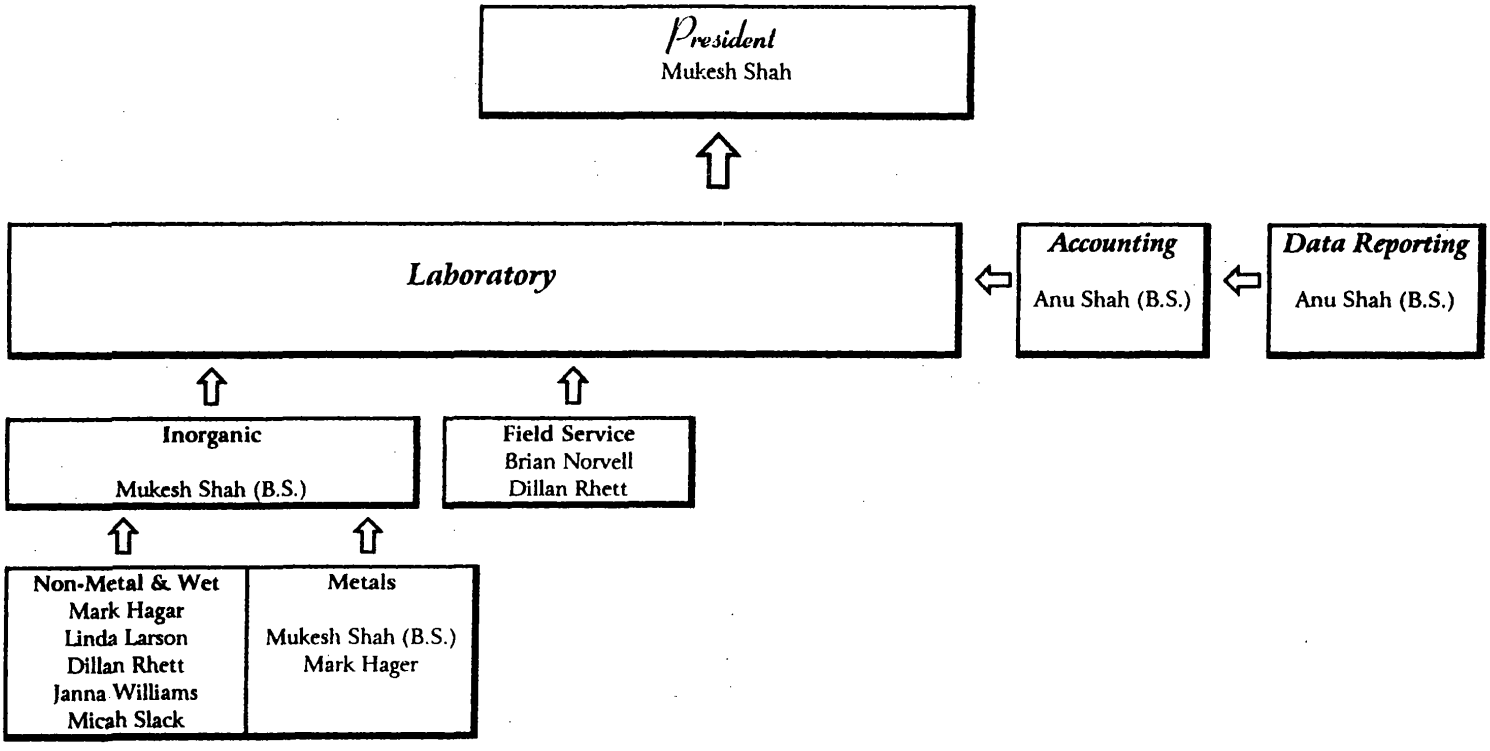
AUDIT TEAM MEMBERS _____

_____

DATE _____

Ex. 5 - Deliberative

ORGANIZATION



PLEASE CIRCLE THE METHOD(S) USED FOR ANALYZING THESE CONTAMINANTS:

Excerpted from Manual for the Certification of Laboratories Analyzing Drinking Water, Fourth Edition. Approved Methods for Primary Inorganic Chemicals, Parameters in the Lead and Copper Rule, Sodium and Turbidity [141.23(k)(1)]

Contaminant	Methodology	EPA	ASTM[3]	SM[4]	Other
Antimony	ICP-MS	200.8[2]			
	Hydride-AA		D3697-92		
	AA-Platform	200.9[2]			
	AA-Furnace	204.2		3113B	
Arsenic	ICP	200.7[2]		3120B	
	ICP-MS	200.8[2]			
	AA-Platform	200.9[2]			
	AA-Furnace	206.2	D2972-93C	3113B	
	Hydride-AA		D2972-93B	3114B	
Asbestos	TEM	100.1[9]			
	TEM	100.2[10]			
Barium	ICP	200.7[2]		3120B	
	ICP-MS	200.8[2]			
	AA-Direct			3111D	
	AA-Furnace			3113B	
Beryllium	ICP	200.7[2]		3120B	
	ICP-MS	200.8[2]			
	AA-Platform	200.9[2]			
	AA-Furnace		D3645-93B	3113B	
Cadmium	ICP	200.7[2]			
	ICP-MS	200.8[2]			
	AA-Platform	200.9[2]			
	AA-Furnace	213.2		3113B	
Chromium	ICP	200.7[2]		3120B	
	ICP-MS	200.8[2]			
	AA-Platform	200.9[2]			
	AA-Furnace	218.2		3113B	

PLEASE CIRCLE THE METHOD(S) USED FOR ANALYZING THESE CONTAMINANTS:

Contaminant	Methodology	EPA	ASTM[3]	SM[4]	Other
Cyanide	Man. Distillation followed by:	✓		4500-CN-C	
	Spec., Amenable		D2036-91B	4500-CN-G	
	Spec. Manual	335.2	D2036-91A	4500-CN-E	I-3300-85[5]
	Semi-auto	335.4[6]			
	Ion Sel. Elec. (ISE)			4500-CN-F	
Fluoride	Ion Chromatography	300.0[6]	D4327-91	4110B	
	Manual Distill. SPADNS			4500-F-B,D	
	Manual ISE	4500-F-D	D1179-93B	4500-F-C	
	Automated ISE				380-75WE[11]
	Auto. Alizarin			4500-F-E	129-71W[11]
Mercury	Man. Cold Vapor	245.1[2]	D3223-91	3112B	
	Auto. Cold Vapor	245.2[1]			
	ICP-MS	200.8[2]			
Nitrate	Ion Chromatography	300.0[6]	D4327-91	4110B	B-1011[8]
	Auto. Cd Reduction	353.2[6]	D3867-90A	4500-NO_3-F	
	Ion Selective Elec.			4500-NO_3-D	601[7]
	Man. Cd Reduction	353.3	D3867-90B	4500-NO_3-E	
Nitrite	Ion Chromatography	300.0[6]	D4327-91	4110B	B-1011[8]
	Auto. Cd Reduction	353.2[6]	D3867-90A	4500-NO_3-F	
	Man. Cd Reduction	353.3	D3867-90B	4500-NO_3-E	
	Spectro.	✓		4500-NO_2-B	
Selenium	Hydride-AA		D3859-93A	3114B	
	ICP-MS	200.8[2]			
	AA-Platform	200.9[2]			
	AA-Furnace	270.2	D3859-93B	3113B	

PLEASE CIRCLE THE METHOD(S) USED FOR ANALYZING THESE CONTAMINANTS

Contaminant	Methodology	EPA	ASTM[3]	SM[4]	Other
Thallium	ICP-MS	200.8[2]			
	AA-Platform	200.9[2]			AA Furnace EPA 279.2
Lead	AA-Furnace	239.2	D3559-90D	3113B	
	ICP-MS	200.8[2]			
	AA-Platform	200.9[2]			
Copper	AA-Furnace		D1688-90C	3113B	
	AA-Direct		D1688-90A	3111B	
	ICP	200.7[2]		3120B	
	ICP-MS	200.8[2]			
	AA-Platform	200.9[2]			
pH	Electrometric	150.1[1]	D1293-84	4500-H^+-B	
		150.2[1]			
Conductivity	Conductance	120.1	D1125-91A	2510B	
Calcium	EDTA titration		D511-93A	3500-Ca-D	
	AA-Direct		D511-93B	3111B	
	ICP	200.7[2]		3120B	
Alkalinity	Titration	310.1	D1067-92B	2320B	
	Elec. Titration				I-1030-85[5]
Ortho-phosphate unfiltered, no digestion or hydrolysis	Color, automated ascorbic acid	365.1[6]		4500-P-F	
	Color, ascorbic acid	365.2	D515-88A	4500-P-E	
	Color, phosphomolybdate				I-1601-85[5]
	Auto Segmented flow				I-2601-90[5]
	Auto discrete				I-2598-85[5]
	Ion Chromatography	300.0[6]	D4327-91	4110	

PLEASE CIRCLE THE METHOD(S) USED FOR ANALYZING THESE CONTAMINANTS

Contaminant	Methodology	EPA	ASTM[3]	SM[4]	Other
Silica	Color, molybdate blue				I-1700-85[5]
	Auto Segmented flow				I-2700-85[5]
	Color		D859-88		
	Molybdosilicate			4500-Si-D	
	Heteropoly blue			4500-Si-E	
	Auto. Molybdate reactive silica			4500-Si-F	
	ICP	(200.7[2])		3120B	
Temperature	Thermometric	(170.1)		2550B	
Sodium	ICP	(200.7[2])			
	AA-Direct			3111B	
Turbidity	Nephelometric[6]	(180.1)		2130B	GLI Method 2[12]

FOOTNOTES

1 Methods 150.1, 150.2 and 245.2 are available from US EPA, EMSL,Cincinnati, OH 45268. The identical methods were formerly in "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020, March 1983.

2 "Methods for the Determination of Metals in Environmental Samples - Supplement I," EPA-600/R-94-111, May 1994. Available at NTIS, PB 94-184942.

3 *Annual Book of ASTM Standards*, Vols. 11.01 and 11.02, American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

4 *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, American Public Health Association, 1015 Fifteenth Street NW, Washington, D.C. 20005.

5 Available from Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, CO 80225-0425.

6 "Methods for the Determination of Inorganic Substances in Environmental Samples,: EPA-600/R-93-100, August 1993. Available at NTIS, PB94-121811.

7 Technical Bulletin 601 "Standard Method of Test for Nitrate in Drinking Water," July 1994, PN 221890-001, ATI Orion, 529 Main Street, Boston, MA 02129. This method is identical to Orion WeWWG/5880, which is approved for nitrate analysis. ATI Orion republished the method in 1994, and renumbered it as 601, because the 1985 manual "Orion Guide to Water and Wastewater Analysis," which contained WeWWG/5880, is no longer available.

8 Method B-1011, "Waters Test Method for Determination of Nitrite/Nitrate in Water Using Single Column Ion Chromatography," Millipore Corporation, Waters Chromatography Division, 34 Maple Street, Milford, MA 01757.

9 Method 100.1, "Analytical Method for Determination of Asbestos Fibers in Water," EPA-600/4-83-043, EPA, September 1983. Available at NTIS, PB 83-260471.

10 Method 100.2, "Determination of Asbestos Structure Over 10um in length in Drinking Water," EPA-600/R-94-134, June 1994. Available at NTIS, PB 94-201902.

11 Industrial Method No. 129-71W, "Fluoride in Water and Wastewater," December 1972, and Method No. 380-75WE, "Fluoride in Water and Wastewater," February 1976, Technicon Industrial Systems, Tarrytown, NY 10591.

12 GLI Method 2, "Turbidity," November 2, 1992, Great Lakes Instruments, Inc., 8855 North 55th Street, Milwaukee,Wisconsin 53223.

PLEASE CIRCLE THE METHOD(S) USED FOR ANALYZING THESE CONTAMINANTS

Excerpted from Manual for the Certification of Laboratories Analyzing Drinking Water, Fourth Edition. Recommended Methods for Secondary Drinking Water Contaminants, [143.3]

Contaminant	EPA	ASTM[1]	SM[2]	Other
Aluminum	200.7[3]		3120B	
	200.8[3]		3113B	
	200.9[3]		3111D	
Chloride	300.0[4]	D4327-91	4110B	
	325.3		4500-Cl⁻-D	
Color	110.2		2120B	
Foaming Agents	425.1		5540C	
Iron	200.7[3]		3120B	
	200.9[3]		3111B	
			3113B	
Manganese	200.7[3]		3120B	
	200.8[3]		3111B	
	200.9[3]		3113B	
Odor	140.1		2150B	
Silver	200.7[3]		3120B	I-3720-85[5]
	200.8[3]		3111B	
	200.9[3]		3113B	
Sulfate	300.0[4]	D4327-91	4110B	
	375.2[4]		4500-SO_4-F	
	375.4		4500-SO_4-C,D	
TDS	160.2		2540C	
Zinc	200.7[3]		3120B	
	200.8[3]		3111B	

FOOTNOTES

1 *Annual Book of ASTM Standards*, Vols. 11.01 and 11.02, American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

2 *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, American Public Health Association, 1015 Fifteenth Street NW, Washington, D.C. 20005.

3 "Methods for the Determination of Metals in Environmental Samples - Supplement I", EPA-600/R-94-111, May 1994. Available at NTIS, PB94-184942.

4 "Methods for the Determination of Inorganic Substances in Environmental Samples," EPA-600/R-93-100, August 1993. Available at NTIS. PB94-121811.

5 Available from Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, CO 80225-0425.

PLEASE INDICATE Y (YES) OR N (NO) FOR EACH PARAMETER:

Excerpted from Manual for the Certification of Laboratories Analyzing Drinking Water, Fourth Edition. Preservation and Holding Times for Regulated Parameters.

Parameter	Preservative	Y/N	Container	Y/N	Maximum Holding Times	Y/N
Alkalinity	Cool 4° C	Y	P or G	Y	14 days	Y
Asbestos	Cool 4° C		P or G		48 hours	
Chloride	none	Y (28 days)	P or G	Y	28 days	Y
Color	Cool 4° C	Y	P or G	Y	48 hours	Y
Conductivity	Cool 4° C	Y	P or G	Y	28 days	Y
Cyanide	Cool 4° C, ascorbic acid (if chlorinated), NaOH pH>12	Y	P or G	Y	14 days	Y
Fluoride	none	Y	P or G	Y	28 days	Y
Foaming Agent	Cool 4° C	Y		Y	48 hours	Y
Metals (except Hg)	HNO_3, pH<2	Y	P or G	Y	6 months	Y
Mercury	HNO_3, pH<2	Y	P or G	Y	28 days	Y
Nitrate (chlorinated)	Cool 4° C	Y	P or G	Y	28 days	Y
Nitrate (non-chlorinated)	Cool 4° C, H_2SO_4, pH <2	Y	P or G	Y	14 days	Y
Nitrite	Cool 4° C	Y	P or G	Y	48 hours	Y
Odor	Cool 4° C	Y	Glass	Y	24 hours	Y
pH	none	Y	P or G	Y	immediately	Y
o-Phosphate	Filter immediately, Cool 4° C	Y	P or G	Y	48 hours	Y
Residual Disinfectant	none		P or G		immediately	
Silica	Cool 4° C	Y	Plastic	Y	28 days	Y
Solids (TDS)	Cool 4° C	Y	P or G	Y	7 days	Y
Sulfate	Cool 4° C	Y	P or G	Y	28 days	Y
Temperature	none	Field	P or G	N/A	immediately	Y
Turbidity	Cool 4° C	Y	P or G	Y	48 hours	Y

QUALITY ASSURANCE AND QUALITY CONTROL INFORMATION

PLEASE INDICATE Y (YES) OR N (NO) FOR EACH QUESTION AND FILL IN ANY SPACES WITH INFORMATION WHERE APPLICABLE.

1. Is there a written Quality Control Program plan? Yes

2. Is there a Quality Assurance Manual? Yes
   PLEASE BE PREPARED TO FURNISH A COPY OF QA MANUAL DURING THE ON-SITE.

3. Is there a Quality Control Officer? Yes

   NAME Linda Larson

4. What is the frequency of:
   Duplicate analyses 10 %

   Spike analyses 10 %

   Check standards Yes (Calibration Std or/and Independent Std).

   In-house audits Yes

5. Records and Control Limits Maintained

	Records (Y/N)	Limits (Y/N)
Duplicate analyses	Y	
Spike analyses	Y	
Check standards	Y	

   List analyses for which "NO" applies

6. How are QC analyses used?

   Duplicate analyses Precision

   Spike analyses Accuracy

7. Are records maintained of problems and the corrective actions taken?

   Out of control duplicate results Yes

   Out of control spike results Yes

   Out of control check standards Yes

   Out of control in-house audits Yes

8. Are instrument calibration data recorded? Yes

9. Does standard calibration include ≥ 3 standards and a reagent blank? 2 and/or 3 Std & Blank

10. Is one calibration standard at or below the MCL? _____

11. Do standard concentrations bracket sample concentrations? _____

12. Are routine service checks performed on analytical instruments? Yes

Balances Yes

Spectrophotometers, etc. Yes

List the instruments for which you do not have service contracts None

13. Is the laboratory pure water quality monitored routinely? Yes

Frequency Annual

14. Are all analytical records, necessary to reconstruct the analyses, maintained for three years? Yes

15. Are calculations checked by a second analyst or supervisor? radomly

16. Does your laboratory have a chain-of-custody program? Yes

17. Are records maintained of preservation checks on compliance samples? _____

18. Who provides the preservatives used in compliance samples? Laboratory

19. Is there a sample custodian? No

NAME —

20. Who is responsible for taking the samples (lab or customer)? both

21. Does the laboratory have a written sample rejection policy for compliance samples? made client aware.

PLEASE INDICATE THE INSTRUMENTS USED IN YOUR LABORATORY

Item	No. Of Units	Method	Manufacturer	Model No.
Analytical Balance 0.1mg readability Stable base ASTM type 1 or 2 weights (formerly Class S) Service Contracts	1		AND	ER182A
Magnetic Stirrer Variable speed, TFE coated stir bar	3		Corning	–
pH Meter Accuracy ± 0.1 units Line or battery Usable with specific ion electrodes	3		Jenko	1071
Conductivity Meter Readable in ohms or mhos Range of 2 ohms to 2 mhos Line or battery	2		Oakton	100 Series
Hot Plate Temperature control	2		Thermolyne	Cimarec 3
Centrifuge To 3000 rpm, Option 4 X 50 mL				
Color Standards To verify wavelengths photometers Should cover 200-800 nm				
Refrigerator/ Freezer Standard laboratory, explosion proof for organics Capable of maintaining nominal temperature of 4° C	2		Signature	—
Drying Oven Gravity or convection Controlled from room temp to 180° C or higher (± 2° C)	1		QL	30
Muffle Furnace To 450° C for cleaning organic glassware	1		Vulcan	A550
Thermometers Mercury filled Celsius 1° C or finer subdivision to 180° C NBS certified or traceable	1		Kessler Instrument	
Glassware Borosilicate Volumetrics should be Class A	Gener Class A		Pyrex	Beaker, Flask Funnels etc
Spectrophotometer Range 400-700 nm Band width <20 nm Use several size and shape cells Path length 1-5 cm	1	Cyanide Fluoride Disinfectants Mercury Nitrate/Nitrite o-Phosphate Sulfate Silica	Milton-Roy	401

PLEASE INDICATE THE INSTRUMENTS USED IN YOUR LABORATORY

Item	No. Of Units	Method	Manufacturer	Model No.
Filter Photometer Range 400-700 nm Band width 10-70 nm Use several size and shape cells Pathlength 1-5 cm		Same as Above		
Amperometric Titrator		Disinfectants		
Specific Ion Meter Accuracy ± 1mV		Cyanide Fluoride Nitrate		
Inductively Coupled Plasma (sequential, simultaneous) Computer controlled Background correction Radio frequency generator Argon gas supply Mass Spectrometer Range 5-250 amu Resolution 1 amu peak width at 5% peak height	1	200.7, 3120B 200.8	TJA	IR 15
Water Bath Electric or steam heat Controllable within 5° C to 100° C		Mercury Nitrate Pesticides		
Ion Chromatograph Conductivity detector, UV detector Suppressor column, Separator column	1	Fluoride Chloride Nitrate/Nitrite o-Phosphate Sulfate	EPA 300.0	
Atomic Absorption Spectrophotometer Single channel, single or double beam Grating monochrometer Photo multiplier detector Adjustable slits, Range 190-800 nm Readout system: Response time compatible with AA Able to detect positive interference for furnace Chart recorder, CRT or hard copy printer		Metals		
Air/Acetylene commercial grade		Barium Calcium Nickel Sodium Copper		
Nitrous oxide commercial grade		Barium		

PLEASE INDICATE THE INSTRUMENTS USED IN YOUR LABORATORY

Item	No. Of Units	Method	Manufacturer	Model No.
Graphite Furnace Argon or Nitrogen (commercial grade) Reach required temperatures Background corrector provision for offline analysis Pipets and tips: Microliter capacity with disposable tips 5-100 microliters Metal free tips	1	Antimony, Lead, Arsenic, Barium, Beryllium, Cadmium, Nickel, Chromium, Selenium, Thallium, Copper	Varian	SpectrAA 400
Arsine Generator		Arsenic, Selenium		
Hydride Generator Hydrogen, commercial grade		Antimony Arsenic Selenium		
Mercury Analyzer Spectrophotometer Dedicated analyzer having a mercury lamp acceptable Absorption cell: 10 cm quartz cell with quartz end windows or 11.5 cm plexiglass cell with 2.5 cm ID Air pump to deliver flow of at least 1L/min Aeration tube with coarse glass frit Flowmeter to measure air flow of 1L/min Drying unit: 6 in. Tube with 20 grams magnesium perchlorate or heating device or lamp to prevent condensation on cell	1	Mercury	Bacharach	Coleman 50D
Glassware Separatory funnels Kuderna Danish (K-D) concentrators	9	SOCs	Pyrex	—
Gas Chromatograph Split/splitless injection Oven temperature control $\pm 2^{\circ}$ C Recorder, hard copy Oven temperature programmer Sub-ambient accessory Variable constant differential flow control		Organics		
Electron Capture Detector Linearized		504.1, 505, 508, 508.1, 508A, 515.1, 515.2, 551, 552.1		
Electrolytic Conductivity and Photoionization Detectors		502.2 506 (PID only)		
Nitrogen Phosphorus detector		507		

PERFORMANCE EVALUATION
WSO PE STUDIES

LABORATORY _____ DATE _____ Code # _____

ANALYTE	WSO#	DATE	RESULT	STATUS	COMMENT*	WSO#	DATE	RESULT	STATUS	COMMENT*	WSO#	DATE	RESULT	STATUS	COMMENT*
III. Aldicarb															
Aldicarb sulfone															
Aldicarb sulfoxide															
Carbofuran															
Oxamyl (Vydate)															
IV. PCBs															
V. Diquat															
VI. Endothall															
VII. Glyphosate															

*Check if comment made. Record comment on comment section of record.

Laboratory	Date of Last On-site Inspection
Accutest	9/99
Anderson, Inc.	6/94
Clarksburg Water Board	10/97
REI Consultants	9/97
C. T. and E. Env. Services	8/97
Reliance Labs, Inc., Bridgeport, W. Va	10/97
Sturm Environmental Service	10/97
W. Va. American Water Co., Charleston	9/97
Wheeling Water Treatment	10/97
Reliance Labs, Inc. Hedgesville	3/95
Bio-Chem Testing	6/95 (12/99 Partial?)

DATE:

TO:

FROM: **Certification Officer**
Office of Laboratory Services
167 11th Avenue
South Charleston, WV 25303

SUBJECT: **CERTIFICATION APPLICATION**

Laboratories desiring to apply for certification for drinking water analyses for the State of West Virginia under the Safe Drinking Water Act should:

1. Complete the attached application;

2. Remit the indicated fee which is based on your current approval or make appropriate changes; and

3. Supply the requested information. Other information may be requested at a later date.

Certificates will be mailed as soon as your application packet has been processed.

Should you require additional information, please contact:

Environmental Chemistry	(304) 558-0197
Environmental Microbiology	(304) 558-3530

Attachments

BB/wgt

WEST VIRGINIA DEPARTMENT OF HEALTH & HUMAN RESOURCES
Bureau of Public Health
Office of Laboratory Services

Application for Laboratory Certification

Drinking Water Analyses
Out-of-State Laboratory

Date _____

Name of Laboratory _____

Address _____

_____

Telephone Number _____

Name of Director _____

Contact Person _____

Test Category	Add	Annual Fee (Please Circle)
Microbiology		$500.00
Chemistry (Inorganics)		500.00
Chemistry (TTHM/VOC)		500.00
Chemistry (All other organics Pest./Herb)		500.00
		$

MAKE CHECKS PAYABLE TO: **WVOLS**
(West Virginia Office of Laboratory Services)

This application must be accompanied by the information requested on the attached pages. Questions concerning the application may be directed to the Chemistry Certification Officer at (304) 558-0197 and the Microbiology Certification Officer at (304) 558-3530.

WEST VIRGINIA DEPARTMENT OF HEALTH & HUMAN RESOURCES
Bureau of Public Health
Office of Laboratory Services

Application for Laboratory Certification

Drinking Water Analyses
Out-of-State Laboratory

Date _____

Name of Laboratory _____

Address _____

_____

Telephone Number _____

Name of Director _____

Contact Person _____

Test Category	Add	Annual Fee (Please Circle)
Microbiology		$500.00
Chemistry (Inorganics)		500.00
Chemistry (TTHM/VOC)		500.00
Chemistry (All other organics Pest./Herb)		500.00
		$

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WEST VIRGINIA DEPARTMENT OF HEALTH & HUMAN RESOURCES
Bureau of Public Health
Office of Laboratory Services

Application for Laboratory Certification

Drinking Water Analyses
Out-of-State Laboratory

Date _____

Name of Laboratory _____

Address _____

_____

Telephone Number _____

Name of Director _____

Contact Person _____

Test Category	Add	Annual Fee (Please Circle)
Microbiology		$500.00
Chemistry (Inorganics)		500.00
Chemistry (TTHM/VOC)		500.00
Chemistry (All other organics Pest./Herb)		500.00
		$

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(West Virginia Office of Laboratory Services)

This application must be accompanied by the information requested on the attached pages. Questions concerning the application may be directed to the Chemistry Certification Officer at (304) 558-0197 and the Microbiology Certification Officer at (304) 558-3530.

WEST VIRGINIA DEPARTMENT OF HEALTH & HUMAN RESOURCES
Bureau of Public Health
Office of Laboratory Services

APPLICATION FOR CERTIFICATION

Drinking Water Analyses
Information Sheet

Out-of-State Laboratory

Name of Laboratory _____

1. Is your laboratory currently approved by your state to perform compliance testing for the EPA Safe Drinking Water Act (SDWA)? ☐ Yes ☐ No

2. What is the date of your most recent on-site survey? _____ (Please submit copy)

3. Please submit the following:

   A. Copy of last 3 EPA water study test results printout. (**Chemistry Results ONLY**)

   B. Copy of your most current letter or certificate of certification.

   C. Copy of Quality Assurance Manual, personnel roster and equipment list.

4. Place an (X) beside the tests in each category for which you desire certification and indicate your current certification status within your home state.

ANALYTE/TEST	REQUEST WV CERTIFICATION	CURRENT STATUS		
		Certified	Provisional Conditional Certification	Decertified
Microbiology Group I Membrane Filter (Total & Fecal or E. Coli				
Microbiology Group II Heterotropic Plate Count				
Microbiology Group III Multitube (Total & Fecal or E. Coli				
Microbiology Group IV ONPG-MMO MUG (Total & Fecal Coliforms)				
TRACE METALS - Group I				
- Lead				
- Copper				

ANALYTE/TEST	REQUEST WV CERTIFICATION	CURRENT STATUS		
		Certified	Provisional Conditional Certification	Decertified
TRACE METALS Group II				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Chromium				
Mercury				
Nickel				
Selenium				
Thallium				
INORGANICS				
Group I Nitrate - N				
Group II Nitrite - N				
Group III Fluoride				
Group IV Asbestos				
Group V Cyanide				
ORGANICS, Pesticides				
Group I				
Endrin				
Lindane				
Methoxychlor				
Toxaphene				
Chlordane				
Heptachlor				
Heptachlor epoxide				
Hexachlorobenzene				
Hexachlorocyclopentadiene				

ANALYTE/TEST	REQUEST WV CERTIFICATION	CURRENT STATUS		
		Certified	Provisional Conditional Certification	Decertified
ORGANICS, Pesticides				
Group II				
Alachlor				
Atrazine				
Simazine				
Group III				
Aldicarb				
Aldicarb sulfone				
Aldicarb sulfoxide				
Carbofuran				
Oxamyl (Vydate)				
Group IV PCB's (Screen & Confirm)				
Group V Diquat				
Group VI Endothall				
Group VII Glyphosate				
ORGANICS Herbicides				
2, 4-D				
2, 3, 5-TP (Silvex)				
Pentachlorophenol				
Dinoseb				
Dalapon				
Picloram				
ORGANICS, Trihalomethanes				
Chloroform				
Bromodichloromethane				
Chlorodibromomethane				
Bromoform				
Total Trihalomethane				

ANALYTE/TEST	REQUEST WV CERTIFICATION	CURRENT STATUS		
		Certified	Provisional Conditional Certification	Decertified
VOLATILE ORGANIC CHEMICALS				
Group I				
Benzene				
Carbon tetrachloride				
1,2 - Dichloroethane				
Trichloroethylene				
1,1 - Dichloroethylene				
1,1,1 - Tichloroethylene				
P - Dichlorobenzene				
Vinyl Chloride				
O-Dichlorobenzene				
cis-1,2 - Dichloroethylene				
trans-1,2 - Dichloroethylene				
Ethylbenzene				
Styrene				
Tetrachloroethylene				
Toluene				
(Total) Xylenes				
Monochlorobenzene				
Dichloromethane				
1,2,4 - Trichlorobenzene				
1,1,2 - Trichloroethane				
1,2 - Dichloropropane				
VOC's				
Group II				
Ethylene dibromide (EDB)				
Dibromochloropropane (DBCP)				

ANALYTE/TEST	REQUEST WV CERTIFICATION	CURRENT STATUS		
		Certified	Provisional Conditional Certification	Decertified
SOLUBLE ORGANIC CHEMICALS (SOCS)				
Group I				
Benzo(a)pyrene				
Group II				
Di(2-ethylehexyl adipate)				
Di (2-ethylhexyl phthalate)				
Group III 2,3,7,8-TCDD (Dioxin)				

STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Cecil H. Underwood
Governor

Joan E. Ohl
Secretary

ENVIRONMENTAL CERTIFICATION

WATER QUALITY LABORATORIES CERTIFIED FOR MICROBIOLOGICAL AND/OR CHEMICAL EXAMINATION OF DRINKING WATER UNDER THE SDWA

1999

Microbiological Certification Officers

Tom Ong

(304) 558-3530

Chemistry Certification Officers

Dr. Wayne Morganroth

(304) 558-0197

BUREAU FOR PUBLIC HEALTH
OFFICE OF LABORATORY SERVICES
167 11th Avenue
South Charleston, West Virginia 25303-1137

Phone: (304) 558-3530

FAX: (304) 558-2006

WEST VIRGINIA WATER QUALITY LABORATORIES

1999 Key to List of Approved Tests

MICROBIOLOGY

Group I
Membrane Filter
(Total and Fecal Coliforms)

Group II
Heterotrophic Plate Count

Group III
Multitube Fermentation
(Total and Fecal Coliform)

Goup IV
Chromogenic/Fluorogenic Substrate
(Total Coliforms and *E. coli*)

TRACE METALS

Group I
Lead
Copper

Group II
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Mercury
Selenium
Thallium

INORGANICS

Group I
Nitrate - N

Group II
Nitrite - N

Group III
Fluoride

Group IV
Asbestos

Group V
Cyanide

ORGANICS, PESTICIDES

Group I
Endrin
Lindane
Methoxychlor
Toxaphene
Chlordane
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene

Group II
Alachlor
Atrazine
Simazine

Group III
Aldicarb
Aldicarb sulfone
Aldicarb sulfoxide
Carbofuran
Oxamyl (Vydate)

Group IV
PCB's (Screen and Confirm)

Group V
Diquat

Group VI
Endothall

Group VII
Glyphosate

ORGANICS, HERBICIDES

2,4-D
2,4,5-TP (Silvex)
Pentachlorophenol
Dinoseb
Dalapon
Picloram

ORGANICS, THM's

Chloroform
Bromodichloromethane
Chlorodibromomethane
Bromoform
Total Trihalomethanes

ORGANICS (VOC's)

Group I
Benzene
Carbon tetrachloride
1,2-Dichloroethane
Trichloroethylene
1,1-Dichloroethylene
1,1,1-Trichloroethane
p-Dichlorobenzene
Vinyl chloride
o-Dichlorobenzene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
Ethylbenzene
Styrene
Tetrachloroethylene
Toluene
Xylenes (Total)
Monochlorobenzene
Dichloromethane
1,2,4-Trichlorobenzene
1,1,2-Trichloroethane
1,2-Dichloropropane

Group II
Ethylene dibromide (EDB)
Dibromochloropropane (DBCP)

ORGANICS (SOC's)

Group I
Benzo(a)pyrene

Group II
Di(2-ethylhexyl)adipate
Di(2-ethylhexyl)phthalate

Group III
2,3,7,8-TCDD (Dioxin)

RADIOLOGICALS

Gross alpha
Gross beta
Radium 226
Radium 228
Tritium
Strontium 89
Strontium 90
Iodine 131
Cesium 134
Cesium 137
Cobalt 60
Uranium
Radon-222

*** Indicates Conditional/Provisional/Interim Certification**

NOTE: Unless specifically noted, a laboratory should be considered certified for the entire group of analytes under each parameter heading.

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
ACCULAB, INC. #1 Acculab Drive P.O. Box 367 Mount Gay, WV 25637	Randall P. Carpenter (304) 752-6798	00231 C	Metals I*
Analabs, Inc. 196 Dayton Street Crab Orchard, WV 25827	Charles Thompson (304) 255-4821	00442 CM	Microbioloby I, II, IV Metals I, II Inorganics I, II, III, V
Beckley Water Company 1006 Pluto Road Shady Springs , WV 25918	Eddie Kidd (304) 763-2691	00411 M	Microbiology IV
Bio-Chem Testing Inc. Putnam Village Shopping Center-Unit 23 Teays, WV 25569	Mukesh Shah (304) 757-8954	00444 C	Metals I, II (Thallium*) Inorganic I, II, V
Clarksburg Water Board 1001 South Chestnut Street Clarksburg, WV 26301	Patsy Trecost (304) 624-5467	00171 CM	Microbiology I, II, III, IV Metals I
CT&E Environmental Services, Inc. 1258 Greenbrier Street Charleston, WV 25311	Paul P. Painter (304) 346-0725	00202 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, III Herbicides THM VOC I, II SOC I
Fairmont Water Plant Filtration Plant - Morris Park Fairmont, WV 26555-1428	Doug Amos (304) 366-1461	00251 M	Microbiology I
Hydrochem Laboratories, Inc. Rt. 18 and First Street Shenandoah Junction, WV 25442	Herbert S. Snyder (304) 725-6174	00191 M	Microbiology IV
Morgantown Utility Board Robert B. Creel Water Treatment Facility 171 S. University Avenue Morgantown, WV 26505	Greg Shellito (304) 296-4322	00311 M	Microbiology I, II, IV
REI Consultants, Inc. 225 Industrial Park Road Beaver, WV 25813	James L. Hern, Ph.D. 1-800-999-0105	00412 CM	Microbiology I, II, IV Metals I, II Inorganics I, II, III, V Pesticides I, II, III, IV, V, VI, VII Herbicides THM VOC I, II SOC I, II
Reliance Labs, Inc. One Eagle Plaza,, Suite I Hedgesville, WV 25427	William Kirk, Jr. (304) 754-7360	00443 CM	Microbioloby IV Inorganics I, II, III, V*

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
Reliance Labs, Inc. Benedum Airport Industrial Park Bridgeport, WV 26330	William Kirk, Jr. (304) 842-5285	00354 CM	Microbiology I, II, IV Metals I*, II* Inorganics I*, II*, III* THM VOC I
Sturm Environmental Services Brushy Fork Road Bridgeport, WV 26330	David W. Fisher (304) 623-6549	00172 CM	Microbiology I, II, III, IV Metals I, II Inorganics I, II, III, V
Touchstone Research Laboratory, Ltd. The Millenium Centre Triadelphia, WV 26059	H. A. Cook, Ph.D. (304) 547-5800	00352 M	Microbiology IV
Tradet Laboratories, Inc. RD 2, Box 227A, Battle Run Road Triadelphia, WV 26003	Richard P. Whitt (304) 547-9094	00353 M	Microbiology I, II
Weirton Water Treatment Plant 3031 Birch Drive Weirton, WV 26062	Jeff Pearce (304) 797-8566	00051 M	Microbiology I, II, III
Weirton Steel Corporation 400 Three Springs Drive - QA Weirton, WV 26062	Paul Sobutka (304) 797-2658	00052 M	Microbiology I, II, III
West Virginia Department of Health Office of Laboratory Services Environmental Microbiology Section 167 - 11th Avenue South Charleston, WV 25302	Dr. Frank W. Lambert, Jr. (304) 558-3530	00003 M	Microbiology I, II, III, IV
West Virginia Department of Health Region 9 District Health Office 44 Wiltshire Rd. Kearneysville, WV 25430	Elizabeth Karickhoff (304) 725-5832	00005 M	Microbiology I, II, III, IV
West Virginia Department of Health Office of Laboratory Services Environmental Chemistry Section 4710 Chimney Drive, Suite G Charleston, WV 25302	Dr. Frank W. Lambert, Jr. (304) 558-0197	00003 C	Metals I, II Inorganics I, II, III
Wheeling Water Treatment Plant 1305 Richland Avenue Wheeling, WV 26003	Philip Kowalski (304) 234-3835	00351 CM	Microbiology I, II, III THM
WVAWC - Huntington 24th Street and Ohio River Road Huntington, WV 25710	Dave Peters (304) 525-8193	00061 M	Microbiology I, II, IV
WVAWC - Kanawha Valley Court and Dryden Streets Charleston, WV 25301	Teri Merrifield (304) 340-2037	00201 CM	Microbiology I, II, III Metals I, II (Thallium*, except Barium) Inorganics I*, II, III THM

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
WVAWC - Montgomery 148 - 6th Avenue Montgomery, WV 25136	Teri Merrifield (304) 442-9728	00101 M	Microbiology I, II
WVAWC - Oak Hill 225 Jones Avenue Oak Hill, WV 25901	Marshall Murray (304) 465-0682	00102 M	Microbiology I, II
WVAWC - Bluestone 227 Edwards Road True, WV 25988	Marianne Lawrence (304) 466-5050	00446 M	Microbiology I, II
WVAWC - Bluefield RR 2, Box 425 A Bluefield, WV 24701	John Willis (304) 327-8913	00282 M	Microbiology I, II
WVAWC Corporate Office 1600 Pennsylvania Ave. Charleston, WV 25302	Tom Holbrook (304) 353-6334		
WVAWC - Weston R.R. 2, Box 192 Weston, WV 26452	Billie Suder (304) 269-1804	00211 M	Microbiology I*, II*

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
Aqua Tech Environmental Laboratories, Inc. Organic Testing 6878 South State Rt. 100 Melmore, OH 44845	Wade Bayer (419) 397-2659	9905 C	Pesticides I, II, III, IV, V, VI, VII Herbicides THM VOC I, II SOC I, II
Aqua Tech Environmental Laboratories, Inc. Inorganic Testing 1776 Marion-Waldo Rd. Marion, OH 43302	Deb Johnson (740) 389-5991	9905 C	Metals I, II Inorganics I, II, III, V
Belleville Laboratory American Water Works Service Co. 1115 South Illinois Street Belleville, IL 62220-3102	John T. Pivinski (618) 235-3600	9911 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, III, IV V, VI, VII Herbicides THM VOC I, II SOC I, II
Broward Testing Laboratory, LTD. 4416 N.E. 11th Avenue Ft. Lauderdale, FL 33334	Gary Meyer (954) 776-7238	9909 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, III, V, VI, VII Herbicides SOC I, II
Environmental Health Labs 110 South Hill Street South Bend, IN 46617	Earl Hansen (219) 233-4777	9927 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, III, IV, V, VI, VII Herbicides THM VOC I, II SOC I, II
Environmental Chemical Corp. 3235 Omni Drive Cincinnati, OH 45245	Mona Risk, Ph. D. (513) 752-2950	9939 C	Metals I, II Inorganics I, II, III, V Pesticides I (Methoxychlor*) (Except for Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene) THM VOC I SOC I, II
Express Analytical Services, Inc. 375 Floral Avenue Chambersburg, PA 17201	Irving M. Kipnis, Ph.D. (717) 263-3222	9925 M	Microbiology I, II, IV
Fredericktowne Labs, Inc, 3039-C Ventrie Court Myersville, MD 21773	Mary L. Miller, Ph.D. (301) 293-3340	9924 M	Microbiology I, II, III

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
Free-Col Laboratories, Ltd. 11618 Cotton Road Meadville, PA 16335	Eric L. Botnick (814) 724-6242	9907 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, IV, V, VI Herbicides THM VOC I, II SOC I, II
Joiner Micro Laboratories, Inc. 77-F West Lee Street Warrenton , VA 20186	Robyn Joiner (540) 347-7212	9934 M	Microbiology II, III, IV
KNL P.O. Box 1833 Tampa, FL 33601	Cheryl Hicks (813) 229-2879		Radiologicals Gross Alpha, Gross Beta, Radium 226, Radium 228, Strontium 89, Strontium 90, Uranium
Lancaster Laboratories A Division of Thermo Analytical 2425 New Holland Pike Lancaster, PA 17605-2425	Timothy S. Oostdyk, Ph.D. (717) 656-2300	9906 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, III, IV, V, VI, VII Herbicides THM VOC I, II SOC I, II
McCoy & McCoy Laboratories, Inc. 85 East Noel Avenue Madisonville, KY 42431	Doug Wolfe (502) 821-7375	9931 C	Metals I, II Inorganics I, II, III, V Pesticides I, II, III, IV, V, VI, VII Herbicides THM VOC I, II SOC I, II
McCoy & McCoy Laboratories, Inc. 117 Island Creek Road Pikeville, KY 41501	Chris Howell (606) 432-3104	9928 CM	Microbiology I, II, III Metals I, II Inorganics I, II, III, V Radiologicals Gross Alpha, Gross Beta
Mid Atlantic Laboratories, Inc. 14294 Big Timber Road King George, VA 22485-3009	Sylvia C. Storke (703) 775-7775	9926 M	Microbiology II, IV
National Testing Laboratory, Ltd. 556 S. Mansfield Road Ypsilanti, MI 49187	Lorri White (313) 483-8333 LAB (216) 449-2525 OFFICE	9903 C	Metals I, II Inorganics I, II, III Pesticides I, II Herbicides THM VOC I, II
Quanterra, Inc. 4101 Shuffel Drive, NW North Canton, OH 44720	Christopher R. Oprandi (330) 497-9396	9902 C	Metals I, II Inorganics I, II, III, V
Quanterra, Inc. 880 Riverside Parkway West Sacramento, CA 95605	Roger A. Freize, II (916) 373-5600	9930 C	SOC III*

Name and Address of Laboratory	Laboratory Director	Certification Number	Tests for Which Approved
Severn Trent Laboratories - Chicago 2417 Bond Street University Park, IL 60466-3182	Michael Healy (708) 534-5200	9920 C	Metals I, II Inorganics I, II, III, V* THM VOC I, II
Shenandoah Bacteriological Laboratory 434 Reynolds Road Cross Junction, VA 22625	Greg Jones 1-888-888-4505	9941 M	Microbiology IV
Triangle Labs, Inc. 801 Capitola Drive Durham, NC 27713-4411	Philip W. Albro, Ph.D. (914) 544-5729	9923 C	SOC III*
U.S. Army Center for Health Promotion and Preventive Medicine 5158 Blackhawk Road Aberdeen Proving Ground, MD 21010-5422	LTC. Douglas S. Rinehart (410) 671-4465	9938 C	Metals I, II Inorganics I, II, III Pesticides I, II Herbicides THM VOC I, II SOC I, II